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SUMMARIES OF RESEARCH
AND
DEVELOPMENT ACTIVITIES
IN
AGRICULTURAL EDUCATION

1978 - 1979

United States of America

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Compiled and Edited

by

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PREFACE

This document represents the fifth annual national Summaries of Research and Development Activities in Agricultural Education in the United States of America. Personnel from states not included in this compilation are encouraged to submit summaries for succeeding issues.

The compilation includes abstracts of 165 studies completed during the period, July 1, 1978 to June 30, 1979. Fifty-three of the completed studies represent staff research, 78 represent master's theses, and 34 represent doctoral dissertations. Studies are arranged alphabetically by state and alphabetically by author within states. A subject index is included.

Studies reported as being in progress during 1979-1980 are also compiled. They are arranged alphabetically by state and by author within states. There are 68 staff studies, 41 master's theses and 61 doctoral dissertations in progress.

The compilation of Summaries of Research and Development Activities in Agricultural Education is an activity of the Research Committee, Agricultural Education Division, American Vocational Association. Jimmy G. Cheek of the University of Florida has been appointed to compile the 1979-1980 report.

The location of previous Summaries of Studies compiled by region and nationally is shown at the back of this publication.

The editor acknowledges and expresses gratitude to all of those who assisted with this effort. Special appreciation is extended to Dr. Carl E. Beeman, Ms. Ellen Sarris, Mrs. Lynn Kirkland, Ms. Linda Krystopowicz, and my wife, Ileen.

Jimmy G. Cheek

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SUMMARIES OF RESEARCH AND DEVELOPMENT ACTIVITIES IN AGRICULTURAL EDUCATION, 1978-79

ALABAMA

DRAKE, James Bob, IVERSON, Maynard J., JOHNDROW, James D., and others. "Project VO-ED COMP--Vocational Education Curriculum Operation and Management Plan." Staff Project, 1979, Auburn University, Auburn.

Purpose. The primary purpose of the project was to develop a model for curriculum development and management in Alabama's Vocational-Technical Education system. Major objectives were: (1) to determine priorities for curriculum development and management functions in Vocational-Technical Education for the State of Alabama and (2) to develop a coordinated curriculum development and management plan for Vocational-Technical Education in Alabama.

Method. The project staff organized a steering committee (and ad hoc sub-committees, by function), made extensive searches of the literature including an ERIC System computer search, contacted institutions involved in curriculum work nationwide, held an invitational conference to review status of Alabama curriculum development, conducted on-site visits of units in the State, visited 12 out-of-state curriculum development units, conducted a needs survey of 1530 vocational personnel and secured a third-person evaluation of the project.

Findings. Major objectives were accomplished and reported in the following publications:

(#1) Status of Vocational Curriculum Development and Management in Alabama, 93 pages.

(#2) Curriculum Resources and Services Available to Vocational-Technical Education in Alabama, 87 pages.

(#3) A Model and Guide for the Assessment of Curriculum Development Personnel in Alabama's Vocational-Technical Education System, 67 pages.

(#4) A Demonstrated Prioritization Model for Curriculum Development in Alabama's Vocational-Technical Education System, 59 pages.

(#5) A Classification and Retrieval System for Vocational-Technical Education Curricular Materials in Alabama, 63 pages.

(#6) A Vocational Education Curriculum Operation and Management Plan and Model for Alabama, 83 pages.

(#7) Final Report--Vocational Education Curriculum Operation--Management Plan (VO-ED COMP), 150 pages.

The Agribusiness Education division of the State Department of Education was found to be a major developer and disseminator of curriculum materials, primarily teacher guides and mediated student materials. Staff consisted of .84 FTE professional curriculum developers and 1.5 FTE aides. Over 20,000 units of materials are distributed annually by a variety of means but primarily through District Specialists' supervisory visits. Initial copies are provided free; additional copies are sold at cost-recovery prices. The curriculum development unit in Agribusiness Education is located at Auburn University and has its own equipment and facilities. Materials are revised every five years; evaluation of curriculum materials is done by a survey of teachers. The Alabama Agribusiness Filing System is used to catalog and index materials. A needs assessment of teachers indicated a number of subject areas where audiovisuals, teacher guides and student materials were needed. Using a prioritization model, three agricultural topics rated in the top 12 priority areas: agricultural production (first), ornamental horticulture (fifth) and meat cutting (eleventh). Details of these and other findings/recommendations may be seen in the above-listed publications or in the ERIC System.

ARIZONA

AUNE, Patricia E. "The Identification and Categorization of Expanded Food and Nutrition Education Program Aides' Competencies." Master of Science Thesis, 1979, The University of Arizona, Tucson.

Purpose. The purpose of this study was to identify Expanded Food and Nutrition Education Program (EFNEP) aide competencies and categorize these competencies into preservice and inservice segments.

Method. A previous study included 280 competencies stated as behavioral objectives. A random drawing provided the 143 competencies which were included in this questionnaire. The questionnaire was mailed to a sample of EFNEP aides and Extension home economists (EHEs) in Arizona, New Mexico, and North Dakota.

Findings. Responses from 63 paraprofessionals and 25 Extension home economists placed 39 competencies in the "before working with families" preservice category. The inservice "during the first year" category had 100 competencies. Four competencies were placed in both categories. The survey results indicated variances in state and EFNEP unit responses. This implies a need for flexible training guides. The EFNEP aide and Extension home economist need to plan competency based training which meets aide and EFNEP unit needs. The identified and categorized competencies are a basis for the development of such training.

GILROY, James T. "Navajo Cultural Factors Related to Agricultural Education on the Navajo Nation in Arizona." Master of Science Thesis, 1978, The University of Arizona, Tucson.

Purpose. The purpose of this study was to identify Navajo cultural factors important for effective communication of the non-Navajo agricultural educator with Navajo youth on the Arizona Navajo Nation. The importance of these cultural factors was determined, in 1978, by interviews with Navajo students attending public secondary schools in different geographic areas of the Navajo Nation.

Method. Navajo cultural factors pertinent to the study were synthesized from anthropological literature and preliminary interviews with Navajos, agricultural educators, and anthropologists. The importance of these cultural factors were rated in personal interviews with sixty Navajo vocational agriculture students from three secondary schools on the Navajo Nation. These three schools were representative of specific geographic regions. Based upon the student's response, the cultural factors were ranked in their order of importance.

Findings. Major findings include: (1) a list of forty-four Navajo cultural factors synthesized from anthropological literature and preliminary interviews; (2) a rating of the importance of each cultural factor by school; and (3) a ranking of the Navajo cultural factors comparing the student response of the schools.

GOULD, James E. "Decision Making Characteristics of Chautaqua County, New York Legislators and their Perceptions of Legislator Effectiveness." Master of Agricultural Education Report, 1979, The University of Arizona, Tucson.

Purpose. The purpose of this study was to (1) assess the present level of decision-making skills, understandings, and attitudes of local elected legislators, (2) to determine local legislator perceptions of behavioral style and characteristics of an effective legislator, (3) to assess legislator needs for information and training, and (4) to determine if there were differences among legislators based upon education, experience, or government position.

Method. A questionnaire was mailed to 153 local elected legislators in Chautauqua County, New York. Respondents included county legislators, township supervisors and board members, and city council members. A case study was utilized to assess decision-making skills; and an "opinionnaire" was used to seek legislator attitudes about behavioral style, effective legislator characteristics, predictors of effectiveness, and information and training needs. Open-ended responses dealing with decision-making were codified and summarized by the researcher. Statistical data were analyzed by computer, utilizing Version Seven of The Statistical Package for the Social Services.

Findings. Thirty-six percent of the respondents utilized a decision-making process but only 18% were found to utilize some form of information in arriving at a decision. Only three out of 12 styles of behavior were found to be significant with respect to the identification of patterns of effectiveness. Four characteristics were identified as important predictors of effectiveness. Budgeting and taxation subjects were identified as important training needs by all legislators. Other needs included decision-making skills, program evaluation, and communication of skills.

GROSETA, Peter Andrew. "Occupational Status and Factors Involved in Occupational Selection of Graduates of the Vocational Agriculture Department of Amphitheater High School 1967-1977." Master of Agricultural Education Report, 1978, The University of Arizona, Tucson.

Purpose. The purpose of the study was to determine, through the use of a survey, the present occupational status of graduates from the Vocational Agriculture Department at Amphitheater High School between 1967 and 1977, and identify those factors that most influenced them in selecting an occupation.

Method. The data analyzed were collected by means of a mail questionnaire sent to 119 former graduates.

Findings. Only twenty-four per cent of the graduates selected an agricultural or agricultural related occupation. Forty per cent of the female graduates were involved in ornamental horticulture occupations. Factors which had the most effect upon occupational choice by graduates engaged in an agricultural or an agricultural related occupation were: (1) "Liked the type of work associated with occupation," (2) "Training received in Vocational Agriculture," (3) "Being deeply interested in agriculture or agriculture business," and (4) "Influence or guided by Vo-Ag teacher." Forty per cent of the graduates indicated that the curriculum in Vocational Agriculture prepared them "very well" for occupations presently employed in; graduates considered the Future Farmers of America (FFA) as the most beneficial segment of the total program; it appears that graduates selecting an occupation in agriculture were influenced a great deal by their active involvement in the Vocational Agriculture Program and the amount of guidance and counseling provided by the Vocational Agriculture teacher; and indicated that more "hands-on" experiences with a high degree of student involvement be provided in the total instructional program.

MCCORMICK, Floyd G. "Ten Year Assessment of Instructional Units for Teaching Profit Maximizing Principles Inductively." Staff Study, Technical Bulletin 238, Agricultural Experiment, 1979, The University of Arizona, Tucson.

Purpose. The purpose of this study was to assess the effectiveness of instructional resource units designed as a teacher reference for teaching Profit Maximizing Principles by measuring the relative change in students' understanding of the principles resulting from the utilization of the prepared units in instructional programs in vocational agriculture. In addition, a criterion-referenced evaluative instrument on Profit Maximizing Principles was validated.

Method. The "One Group, Pretest-Posttest Design" was employed for statistical interpretation of data collected during the 10 year field testing program. Data on quarter of the academic year units were taught and whether teachers were "trained" or "untrained" were also analyzed. Item analyses were employed to validate test items contained in the evaluative instrument.

Findings. There was a 27.39 per cent increase in understanding of Profit Maximizing Principles by the 684 students involved in the study. This increase was statistically significant at the .001 level. Students taught Profit Maximizing Principles by "trained" teachers performed better than those taught by "untrained" teachers as evidenced by a 20.6 per cent increase in understanding. The effect of quarter (school year) the units were taught upon student understanding of Profit Maximizing Principles revealed no significant difference. The criterion-referenced evaluative instrument had a test reliability of .89. Forty test items contained in the evaluative instrument or 88.9 per cent possessed known discriminatory indices in excess of .21.

MURPHY, Timothy J. "Conceptualizing, Developing, and Designing a Model for Auditing the Marketing Function of Cooperative Extension — a Nonbusiness Organization." Master of Agricultural Education Report, 1979, The University of Arizona, Tucson.

Purpose. The purpose of this study was to develop a management model for auditing the marketing function of Cooperative Extension—a public, nonbusiness organization. Questions concerned: (1) data needs for describing Extension's marketing environment, marketing system, and marketing activities; (2) a feasible design for the audit which facilitates the collection, appraisal, and making of recommendations; and (3) a feasible procedure for administering an audit interview schedule that is both operational and functional when administered at both state and county organizational levels of Cooperative Extension.

__Method__. Data collected and anlyzed were obtained from literature sources and field tests among a sample population consisting of various Extension managers in state and county positions located in both rural and metropolitan settings.

__Findings__. Major findings include: (1) identification of the information needed from Cooperative Extension in terms of topical areas of concern and categories of interest, which describe Extension's marketing environment, marketing system, and marketing activities; (2) an audit design, employing horizontal and vertical concepts of evaluation, which will facilitate the collection and appraisal of information, and making of recommendations for improvement by Extension; and (3) a feasible procedure for administering an audit interview schedule, which is both operational and functional at the state and county levels of Cooperative Extension in Arizona.

PEARSON, Carmen L. G. "Impact Evaluation of Cooperative Extension Education on Guam." Master of Science Thesis, 1979, The University of Arizona, Tucson.

__Purpose__. The purpose of this study was to collect first-hand evaluation information from the adult residents of Guam regarding Cooperative Extension programs. Evaluations provided by the public will contribute to Extension Education's efforts for planning programs.

__Method__. A questionnaire was mailed to 401 registered voters on the Island. Stratified random sampling techniques were performed with a computer.

__Findings__. Findings indicated that the respondents' characteristics were representative of the Island's adult population. Forty-two per cent of Guam's adult population were aware and had prior contact with the Cooperative Extension Service at the University of Guam. They have experienced benefits from these educational programs in many areas of their livelihood and especially in giving them better homes and home life conditions.

Respondents' recommendations for the Cooperative Extension Service, University of Guam included: more personal contact with village residents and more program publicity via all sources of the media.

ZURBRICK, Phillip R. "Agricultural Employment in Selected Areas of Arizona." Research Report 277, Agricultural Experiment Station, 1979, The University of Arizona, Tucson.

__Purpose__. This is a third in a continuing series of reports designed to provide accurate information on the levels of employment in Arizona of those occupations requiring agricultural competencies.

__Method__. A random sampling procedure was used to establish changes in employment patterns among established businesses while on-site interview with newly identified businesses.

__Findings__. An estimated 33,555 people were employed on either a full-time or part-time basis in jobs requiring some knowledge or skill in agriculture in Arizona. This represents an increase in the number of people reported employed in previous reports. A breakdown of employment by instructional program areas shows that over 63% of the persons were employed in jobs best served by an agricultural production program. Agricultural supplies/service included the second largest group of employees.

ARKANSAS

YUNG, Kirby C. "Assessment of Needed Competencies of Vocational Special Needs Teachers in the State of Arkansas." Staff Study, 1978, University of Arkansas, Pine Bluff.

Purpose. The purpose of this project was to identify the special competencies to be taught in preservice teacher preparation programs as well as in inservice training programs for vocational teachers of special needs students. Also, identified competencies would be used for curriculum development purposes.

Method. Two questionnaires were mailed to vocational teachers and school administrators in 46 school districts in Arkansas. The instruments were designed to survey vocational teachers' and school administrators' opinions regarding the priority of teacher training needs as well as to identify the needed competencies of vocational teachers of special needs students. In each questionnaire, a list of competencies of vocational teachers of special needs students was provided, and vocational teachers and school administrators were asked to rate the importance of each competency and how confident they were or their vocational teachers were in preforming that task.

Findings. Major findings of this study were as follows: (1) At least one-fifth to one-third of vocational students in Arkansas needed special services in order to succeed in regular vocational programs. (2) Most school administrators and vocational teachers were interested in inservice training programs. However, only about half of the surveyed school districts offered inservice training programs to update or upgrade their vocational teachers' competencies in teaching special needs students. (3) Totally, 39 competencies of vocational special needs teachers were identified and grouped into 18 areas.

CALIFORNIA

THOMPSON, O. E. and L. Z. McCANDLESS-GROSSMAN. "Emerging Occupations in Agriculture: Impact Upon Curriculum and People, Part I; Yolo County, 1979."Staff Research Project, Department of Applied Behavioral Sciences, University of California, Davis.

Purpose. This pilot study was to identify new and emerging jobs in agriculture as well as those jobs that are declining. It was also designed to assess the attitudes and opinions of employers and employees on the future employment of women and minorities in agriculture. The study was conducted in Yolo County.

Method. Data collection consisted of personal interviews with agricultural employers and employees in Yolo County. The employer sample included 50 individuals from agribusiness and 48 farm/ranch owner/operators. Two hundred interviews were obtained from employees in eight different job categories. Forty different job titles were identified. Interviews were conducted in English or Spanish, as necessary. Questionnaire data and implications of these data were analyzed and reported to the funding agency and distributed to state/regional vocational education curriculum coordinators.

Findings. The main findings of the study included the following. 1) There will be continued growth in the numbers of equipment repair workers and in sales and service personnel. Specific skill areas needed by repair and maintenance workers are electronics, hydraulics, and welding. 2) Although agriculture has lagged behind other industries in providing fringe benefits, paid sick leave, vacation and holidays are now becoming increasingly common, especially in agribusiness. 3) Only 20 percent of the employers surveyed feel that women could be employed in the entire range of agricultural jobs. Tradition and mistrust are part of the barrier; others question the competence of women in agriculture. 4) Minorities, specifically Mexican Americans in Yolo County, were considered by over half the employers to be able to handle any job in agriculture. The major barrier for those of Mexican ancestry has been lack of proficiency in written and oral English, and low educational attainment. Yet most of their co-workers feel they have an increasingly important role in agriculture.

THOMPSON, O. E. and L. Z. McCANDLESS-CROSSMAN. "Emerging Occupations in Agriculture: Impact upon Curriculum and People, Part II, Functions and Activities of Agricultural Personnel in Yolo County, California 1979." Staff Research Project, Department of Applied Behavioral Sciences, University of California, Davis.

Purpose. This project conducted in Yolo County was designed to update a statewide study conducted by the senior author ten years ago. This previous study determined the major functions and activities of workers in 76 different jobs that required various degrees of competence in agriculture. The primary purpose of the pilot study was to develop a document which updated competence and which would serve as a guideline to vocational/occupational instructors who are developing curricula to train workers for entry into particular jobs. It also is to serve as a guide which students might use to determine the competencies they must have to enter a particular job or job group.

Method. Interviews were conducted with 200 workers in agriculture, ranging from farm laborers through managers in agribusiness. Each interviewee described the functions he/she was expected to carry out and then identified the activities performed in carrying out those functions. The data were compiled and job sheets were developed. Each sheet contains a description of the job and the functions and activities performed on that job. Also included is the like information from the 1970 study.

Findings. Identified in the agricultural labor force of Yolo County were 25 of the 76 jobs described in the previous study plus 16 additional job titles not in the original study. Forty-one job descriptions based on the 200 interviews that make up the final document. These jobs are groups into eight major occupational categories: labor, production agriculture; equipment operation and repair; landscape and nursery; sales; technical and quality control; business and office; managerial/supervisorial; and professional. Each of the job titles is keyed to the Dictionary of Occupational Titles (DOT) coding system.

THOMPSON, O. E. and L. Z. McCANDLESS-CROSSMAN. "Women Students - A Major Factor in Growth of Agricultural Programs." Staff Study, Department of Applied Behavior Sciences, University of California Davis, 1979.

Purpose. The purpose of this study was to 1) identify recent (5 years) enrollment patterns in agricultural programs in secondary schools, community colleges, and four-year colleges and universities in California; 2) compare growth in agricultural programs with enrollments in entire educational institutions; and 3) document changes in enrollment by major area of study.

Method. Comparable agricultural enrollment figures (1973-1979) were obtained from secondary schools, community colleges, and four year colleges and universities offering instruction in agriculture. The figures were analyzed by sex and program.

Findings. Findings include the following: 1) women in agricultural programs at all levels in education at the California public institutions have increased at least three times as fast as men, now comprising one-third of the over 100,000 Californians studying agriculture; 2) animal science and ornamental horticulture have been the most popular programs of study for women, but now agricultural economics resource sciences and business aspects are emerging areas of interest; 3) women have only begun to break the barrier into the male-documented occupations in agriculture. Recommendations to employers and educators include: 1) informing employers of the increase in numbers of females who are preparing for careers in agriculture and assisting them in recognizing and correcting their biases towards female employees and 2) apprising female job seekers of the constraints they may encounter and aid them in preparation to deal with these. Also, administrators and educators must recognize the changes that may be necessary in their institutions to accommodate the changing sex composition of their student bodies.

COLORADO

AMEN, Kenneth E. "Competencies of the Cow-Calf Operator." Master's Report, 1979, Colorado State University.

Purpose. The purpose of this study was to determine the occupational competencies necessary to enter the cow-calf operator occupation and to determine the importance of each.

Method. A questionnaire was developed by incorporating all competencies for the seven breeding beef occupations identified in the National Ag Occupations Competency Study with inputs of an industry group from cow-calf operators. Questionnaires were distributed through voc-ag instructors in Colorado, western Nebraska and southern Wyoming to cow-calf operators in their area. Mean scores were derived for each competency by utilizing ratings from thirty-five respondents on a scale where 4=Essential, 3=Important, 2=Of some importance, 1=Not important, and 0=Not applicable.

Findings. Mean scores were determined for each of 179 competencies and for combined competencies in twelve task areas. The twelve task areas ranked from a high mean of 3.39 (Management of Cow Herd) to a low mean of 2.30 (Care of Horses). One hundred six competencies had means between 3.0 and 4.0. Forty-five competencies rated means between 2.5 and 2.99 while twenty-eight competencies had means below 2.5.

CROWDER, Joe. "An Evaluation of the Pre-Service Curriculum in Agricultural Education at Colorado State University." Master's Report, 1979, Colorado State University.

Purpose. The purpose of this study was to determine the effectiveness of the agricultural education curriculum at Colorado State University as indicated by recent graduates and their administrators.

Method. Data were collected by the use of two mailed questionnaires. One questionnaire provided direct curriculum evaluations by 102 graduates residing in Colorado and the other questionnaire provided evaluations of the graduates' performance by 47 administrators.

Findings. Forty percent of the respondents were teaching vocational agriculture. Twenty-seven percent of the remaining respondents had taught vocational agriculture previous to the time of the study.

Graduates rated 75.0 percent of the undergraduate courses as being "of considerable help," 22.5 percent "of some help," and 2.5 percent "of no particular help." Courses rated least helpful were those in art, humanities, and psychology. The courses most frequently listed as most valuable were student teaching, crop production, and feeds and feeding. There was little difference between graduates teaching vocational agriculture and graduates not teaching vocational agriculture in the occupational helpfulness ratings of the courses.

Administrators considered vocational agriculture teachers strong in all areas of personal traits, preparation, performance, and professionalism. The highest ranking traits were standards of morality and physical health. Originality and preparation and use of instructional materials received the lowest rankings by administrators.

GENZREUX, Douglas G. "Colorado Agriculture Graduates' Ability to Perform and Their Source of Agricultural Mechanics Skills." Ph.D. Dissertation, 1979, Colorado State University.

Purpose. The purpose of this study was to establish a data base regarding vocational agriculture students' "ability to perform" and "source of ability to perform" the production agriculture mechanics competencies as identified in the National Agricultural Occupations Competency Study. A comparison was made between students' "ability to perform" and the importance of rankings by farmers on the 361 competencies and on each of the twenty-five competency groups.

Method. A mail-out questionnaire was used to collect data from eighty-three randomly selected 1976-77 graduates who were working in production agricultural occupations or who were continuing their education in occupationally related areas. Chi squared and Pearson correlation analysis were used to determine differences and relationships.

Findings. The students' "ability to perform" was consistent with the importance rankings by farmers and was not affected by variables such as source, size of program, geographical location, parents' occupation or students' occupation. The family was identified as the most important source for the majority of the 361 competencies while the vocational agriculture program was the source for specialized competencies, primarily welding and sketching and drawing.

THOMAS, Larry G. "Vocational Agriculture Teachers' Opinions Relative to Selected Animal Science Competencies." Ph.D. Dissertation, 1979, Colorado State University.

Purpose. The purpose of this study was to determine if there is a significant difference of opinion between vocational agriculture teachers and those expressed in the National Agriculture Occupations Competency Study as to the importance of selected animal science competencies.

Method. Fifteen vocational agriculture teachers in each of the eleven western states were asked to respond to the 158 item survey instrument. One hundred seven teachers returned completed questionnaires. Analysis was done using the Statistical Package for the Social Sciences (SPSS) to test the five hypotheses.

Findings. Vocational agriculture teachers did not agree with the importance of the selected animal science competencies found in the National Agriculture Occupations Study. They tended to rank as "more important" those competencies which they indicated more strength in their ability to perform. Most of their competency in these areas was derived from their own experiences with the secondary source identified as their pre-service teacher preparation program. Overall they ranked their ability to perform these competencies as only slightly better than average.

Comparisons of the variables by states and/or institutions attended indicated little or no difference between groups.

The author concluded that there is a need to upgrade pre-service and in-service preparation of vocational agriculture teachers to aid them in preparing their graduates to go to work in animal science fields.

CONNECTICUT

MANNEBACH, Alfred J. "Theories of Career Development and Occupational Choice: Self and Teaching/Counseling Implications." Staff Study, 1979, The University of Connecticut, Storrs.

Purpose. The purpose of the study was to determine which of several current theories of career development and occupational choice (1) were ranked as most important in regard to the role each played in the subject's own career development and (2) were ranked as most important in regard to the usefulness of the theory in teaching and/or counseling students. An additional purpose of the study was to determine the rank order correlation between the subject's ranking of the theories in regard to self development and the usefulness of the theories in teaching and counseling students.

Method. A unit on theories of career development and occupational choice was taught as part of a graduate course on career education. The course was taught in the summer sessions for three successive years, 1976-1978. Students enrolled in the course were given the assignment to read Chapter III entitled "Theories of Career Development and Occupational Choice"(Bailey and Stadt, 1973). Nine prominent theories of career development and occupational choice are presented in the chapter. Concurrently, the students were given two assignment sheets. The instructions on the first sheet asked the students to "rank in order of importance, from 1-9, the theories of career development and occupational choice listed below in regard to the role each played in your career development." The instructions on the second assignment sheet requested the students to "rank in order of importance, from 1-9, the theories of career development and occupational choice in regard to the usefulness of the theory in teaching and/or counseling your students." Class discussions and simulation activities related to career development theories were held during the time the students were completing the assignments to help each student to understand each theory more thoroughly. The completed assignment sheets were collected and analyzed. The theories were ranked regarding implications for self and teaching/counseling for each of the three classes studied. Rank order correlations (Spearman's rho) were computed for each of the nine theories for each of the three classes studied.

Data were collected from a total of 23 students in the 1976 class while usable data from the 1977 and 1978 classes were collected from 22 and 26 students respectively. Overall, females outnumbered males in the classes 43 to 28. The classes were composed of general and vocational educators from elementary, secondary, community college and university settings. Although teachers composed the largest group, a number of counselors and administrators were also enrolled in the classes.

Findings. Overall combined three year rankings of the theories in regard to importance for self development revealed that Holland's Personality Theory of Vocational Choice was ranked first by the students involved in the study. Super's Developmental Self-Concept Theory was ranked second in regard to the role it played in the student's career development. Regarding the usefulness of the theory in teaching and/or counseling students, O'Hara's Learning Theory was ranked first by the combined three year classes of students involved in the study. Super's Theory was ranked second. Ranking of the theories from 1-9 by class and by combined classes were computed for "self" and "teaching/counseling" implications. Values of Spearman's rho rank order correlations ranged from .79 to .98. Rank order correlation coefficients were computed for each theory for each of the three classes studied.

Results of the study seem to indicate that educators enrolled in a career education course do identify with some theories of career development and occupational choice more than others in regard to the implications that the theories have for the "self" development and teaching/counseling implications for students. The results also indicate that educators are likely to teach and/or counsel their students according to the theories which most influenced them.

FLORIDA

BEEMAN, Carl E., CHEEK, Jimmy G., MCGHEE, Max B., and GRYGOTIS, Ellen M. "Professional Competencies Needed by Extension Agents in the Florida Cooperative Extension Service, A Report of Research." Staff Study, 1979, University of Florida, Gainesville.

Purpose. The purpose of this study was to identify and verify the professional competencies needed by extension agents in Florida.

Method. The population for this study consisted of county and multi-county extension agents and state staff members of the Florida Cooperative Extension Service. In order to obtain requisite information, closed form opinionnaires were developed, field tested, and refined to obtain data from county and multi-county agents and state staff members. Questionnaires were received from 214 (84 percent) of the county and multi-county staff and 10 (67 percent) of the state staff members.

Data were analyzed using descriptive statistics. In addition, the t-test, multiple variate analysis of variance, and analysis of variance was used to analyze data with .05 level of significance as the critical standard.

Findings. The following major findings emerged:

1. Of the 158 competencies studied, incumbent extension agents recognized one (1 percent) as very low to low in importance, 33 (20 percent) as low to moderate in importance, 72 (46 percent) as moderate to high in importance, and 52 (33 percent) as high to very high in importance.
2. State staff members rated five (3 percent) of the competencies as low to moderate in importance, 46 (29 percent) as moderate to high in importance, and 107 (68 percent) as high to very high in importance.
3. State staff members rated all competency categories higher than did incumbent agents. In addition, significant differences existed at the .05 level between incumbent agents and state staff members relative to the following six competency categories: program planning; program execution; research; understanding human behavior; teaching; and 4-H.
4. State staff members rated the most important to the least important competency categories as follows: program planning; maintaining professionalism; understanding human behavior; communication; program execution; public relations; teaching; research; evaluation; administration; and 4-H.
5. Extension agents rated the most important to the least important competency categories as follows: maintaining professionalism; public relations; program planning; communication; program execution; understanding human behavior; teaching; evaluation; administration; research; and 4-H.
6. Significant differences existed among agricultural, home economics, and 4-H agents regarding the way they viewed the competency categories. The most substantial differences occured with respect to the 4-H competency category with highly significant differences occuring between 4-H extension agents when compared to agricultural agents and home economics agents.
7. Age, highest degree earned, and the number of agents employed in a county influenced how agents viewed each competency category.
8. Previous enrollment in 4-H was not a factor that influenced incumbent agents' perceptions regarding the importance of the competency categories.

CHEEK, Jimmy G. "Instructional Improvement for the Course Development and Philosophy of Agricultural Education via an Office of Instructional Resources Mini-Sabbatical." Staff Study, 1979, University of Florida, Gainesville.

Purpose. The central purpose of this project was to develop innovative instructional procedures and materials for Development and Philosophy of Agricultural Education (AED 321).

Method. Research studies concerning competency-based agricultural education were reviewed to determine the specific competencies that should be developed. Also, the purposes of the course in relation to other courses within the department served as a basis for determining the competencies that should be addressed. Specific instructional objectives were then developed using the identified competencies. A detailed plan of instruction was developed based on the competencies and instructional objectives identified above. Also, methods of teaching were examined and modified when appropriate.

All student instructional materials (handouts) were reviewed and modified when necessary and the literature was searched in order to identify additional materials. In addition, the instructor developed materials where voids were detected. Furthermore, appropriate visuals (35 mm slides and overhead transparencies) were developed for the course. One instructional unit was selected for the purpose of developing a self-instructional module. A module of instruction entitled "Developing a Personal Philosophy of Agribusiness and Natural Resources Education" was developed.

Findings. The following outcomes were evident as the result of this instructional improvement activity:

1. Seventy-five objectives were developed using a behavioral objective format.
2. Based on the instructional objectives, current and up-to-date instructional plans were developed for each unit of instruction and the method or methods of instruction to be used were specified.
3. Current student instructional materials (handouts) were developed for each of the 13 units of instruction. A total of 53 handouts were developed.
4. Eighty professionally prepared transparencies and 218 professionally prepared 35mm slides were developed. In addition, 237 35mm slides were taken by the instructor which are related to the instructional programs, facilities, equipment, land laboratories, and FFA activities in Florida.
5. One self-instructional module involving writing one's philosophy of agribusiness and natural resources education was developed.

FARRINGTON, William S. "Problems of Beginning Agricultural Teachers in the Southern Region." Southern Region Study, 1978, University of Florida, Gainesville.

Purpose. The purpose of this study was to quantify and qualify the problems faced by beginning teachers of agriculture at the secondary school level in 13 southern states. The study also attempted to determine if certain types of beginning teachers experienced more problems than did other types.

Method. Of the 886 beginning teachers identified in the 13 participating states, 33 percent of the beginning teachers from each state were randomly selected to be surveyed. A mail questionnaire survey was used to collect information related to the teacher's: 1) background, 2) educational attainment, 3) teaching responsibilities, 4) teaching situation, 5) certification status and 6) perceptions of problems experienced during his/her first and/or second year of teaching.

Findings. Based upon a 75 percent response rate, the major findings of this studywere as follows: the average age of the beginning teacher was 26 years, 19 percent had Masters degrees, 67 percent had a Bachelors degree in agricultural education, 93 percent were male, 87 percent were fully certified to teach agriculture in their state, more teachers indicated that teaching disadvantaged or a high number of students with low academic ability as more of a problem than the other areas studied; in 14 of the 43 problem areas studied, a significant relationship existed, of these 14 "situations", a higher percentage of non-certified teachers were reporting "much or extreme" problems in 13 of the "situations" than were the certified teachers.

FARRINGTON, William S. "Status Study Pre-Vocational Agriculture Programs in Florida." Staff Study, 1978, University of Florida, Gainesville.

Purpose. The primary purpose of this study was to inventory the aspects of the rapidly growing orientation/exploration agriculture program in Florida and to describe the program as it currently functions.

Method. This was a descriptive study utilizing a mail questionnaire survey of all the agribusiness and natural resources teachers in Florida. Follow up techniques effected an 80 percent response rate to the census. Teachers were requested to provide information regarding: 1) course taught, 2) curriculum structure, 3) class sizes, 4) class and FFA activities, 5) use of land laboratory, 6) resources, 7) school policy and 8) teacher and administrative philosophy toward orientation/exploration programs. The results were reported in terms of frequencies and percentages.

Findings. The major findings of this study were as follows: 1.) a majority (55 percent) of the vocational agriculture teachers in Florida teach orientation/exploration classes, 2.) thirteen percent of the respondents were not fully certified to teach, 3.) only one-half of those teachers teaching orientation/exploration courses are employed on a 12 month contract, 4.) the majority (80 percent) of the respondents believe that prevocational agriculture teachers should advise an FFA chapter, 5.) most teachers (76 percent) feel that special FFA contests should be developed for orientation/exploration programs, 6.) enrollment caps (limits) are placed on student enrollment in the courses in some schools.

FARRINGTON, William S. "Micro-Unit Instruction of Teaching Methods." Course Development Project, 1978, The University of Florida, Gainesville.

Purpose. The purpose of this project was to develop innovative units of instruction on specific teaching methods and techniques utilizing agricultural content and the use of video tape equipment.

Method. This was a development project aimed at producing innovative teaching aids for a teaching methodology course. The objectives were reviewed by fellow faculty members for appropriateness. The lesson plans, developed were reviewed and utilized by vocational agriculture teachers and departmental graduate students. The video tapes of the seven micro units on teaching methods were produced utilizing five experienced teachers of Agribusiness and Natural Resources Education and their students. The video tape on discipline management techniques was developed utilizing one of the aforementioned teachers and his students.

Products. This project centered around the development of four products: 1.) *Performance Objectives* were developed for the following method and techniques; demonstrations, lecture, discussion, field trips, problem solving, role playing and use of resource persons. 2.) *Lesson Plans* were developed for each of the methods and techniques studied. 3.) *Teaching Methods Video Tapes* were developed for each of the seven methods studied. Exemplary demonstrations of the use of each method were recorded. 4.) *A Discipline Video Tape* was recorded showing the use of generally effective and generally ineffective discipline management techniques.

MCGHEE, Max B., and BECKER, William J. "Advisory Committees for Agribusiness and Natural Resources Education in the State of Florida," Staff Study, University of Florida, Gainesville, October, 1979.

Purpose. The purpose of this study was to determine the status of advisory committees for Agribusiness and Natural Resources Education (ABNRE) in the public schools of Florida.

Method. A 25 item questionnaire sent to 205 teachers of agriculture in Florida was used to collect the data. Information pertinent to the use and characteristics of advisory committees was obtained. These data were reported in terms of frequencies and percentages.

Findings. Major findings of this study were as follows: a large percentage of ABNRE programs in Florida did not have advisory committees and teachers in these programs were of the opinion that committees are not essential or they had not had time to organize a committee; there was not consistent organizational pattern to ABNRE advisory committees, nor was there any pattern to the committee functions as expressed by the respondents

ZINNER, Charles F., Jr. "Characteristics of Agribusiness and Natural Resources Land Laboratories in Florida," Master of Science Thesis, University of Florida, Gainesville.

Purpose. The central purpose of this study was to identify the current status, use, and educational value of school land laboratories associated with agribusiness and natural resources education programs in Florida. To achieve this purpose the following specific objectives were developed:

1. Describe characteristics of land laboratories.
2. Describe uses made of land laboratories by teachers.
3. Determine perceptions of teachers concerning the primary purposes of land laboratories.

Method. Data were collected by a mailed closed-form questionnaire. Responses were received from 87 (85 percent) of the 102 departments sampled. Analyses of data for Objectives 1 and 2 included frequency distributions and percent of responses to each item. For Objective 3, mean and rank order of responses were also determined.

Findings. The major findings of the study were:

1. Twenty-one characteristics of land laboratories associated with agribusiness and natural resources education programs in Florida were determined. Characteristics such as land laboratory size, length of existence, and facilities and machinery available for use on the land laborary were ascertained.

2. Twenty-two characteristics pertaining to the use of land laboratories were examined. Questions regarding items such as how much time was spent on the land laboratory, when was most routine work done, and the number of student-owned projects on the land laboratory were asked.

3. Fourteen perceptions pertaining to the primary purposes of the land laboratory were determined. The most important purposes of the land laboratory were "to provide opportunities to practice competencies learned in class," "to provide experiences for students to work together cooperatively," and "to teach agricultural competencies."

IDAHO

CHURCH, Leon J. "Factors that Influence Decision to Stay or Leave Idaho Cooperative Extension Service." Paper, Master of Science, 1979, University of Idaho, Moscow.

Purpose. To determine factors which influence staff members to leave or stay in the Idaho Cooperative Extension Service. Secondary objectives were to determine if age, sex, present employment, present income, area of responsibility or district location had any effect on reasons for either staying or leaving the Extension Service. Spouse's attitude toward the Cooperative Extension Service was analyzed.

Method. A questionnaire was mailed to 56 persons who had resigned from the Idaho Cooperative Extension service between January 1, 1974 and December 31, 1978. A random sample of 56 present staff members who had served the Idaho Cooperative Extension Service a minimum of 4 years were also mailed a questionnaire The groups were asked to rate 25 factors according to the level of influence it had on their decision to stay or quit the Idaho Cooperative Extension Service. Results were computed using the mean for each factor and standard deviation from that mean. An analysis of variance was also run on the respondents grouped by sex, present employment, present income, area of responsibility and district location. A Scheffe' post-hoc test was used to determine which category differed from the other(s).

Findings. The results indicated that Idaho Cooperative Extension Employees enjoy the informal nature of the organization. Factors which they feel are most influential reasons for staying with their jobs are freedom to plan and carry out their own program, diversity of day-to-day tasks and organizing events and activities. Respondents also indicated community, relations with public (adult), relations with youth, responsibility associated with job, civil service retirement and flexibility of working hours all influenced staff to stay with the Extension Service.

They are least influenced by factors over which they have little control, such as reporting systems, evaluation systems and state administered programs. The characteristic of "being one's own boss" is an important factor for an Extension worker to do a successful job.

KLEIN, Thomas E. "A Study of the Impact of Admitting Female Students to the High School Vocational Agriculture and FFA Programs in Idaho." Master of Science Thesis, 1979, University of Idaho, Moscow.

Purpose. (1) To determine if the presence of girls in vocational agriculture programs have required changes in facilities, teaching methods, curriculum, field trips or recreation. (2) To determine the percentages of male and female students enrolled in vocational agriculture and FFA and if any correlations exist between the size of program, geographic region, age of the instructor or experience of the instructor. (3) To determine if girls have superior study habits and abilities when compared to boys in vocational agriculture and FFA programs. (4) To determine if more discipline problems have been encountered in the vocational agriculture and FFA programs since girls were admitted. (5) To determine if the proficiency levels of FFA contests have been raised or lowered as a result of girls participating in FFA contests. (6) To determine if Idaho vocational agriculture instructors perceive differences in selected traits of male and female students in their individual programs.

Methods. Data were collected from 44 vocational agriculture instructors and 2 State FFA Officers from Idaho, and were obtained by survey and personal interview. The following information was gathered from 39 schools: (1) number of boys in vocational agriculture and FFA, (2) number of girls in vocational agriculture and FFA, (3) percentage of boys active in FFA, (4) percentage of girls active in FFA, (5) study habits and abilities of girls compared to boys, (6) comparison of students' attitudes, (7) changes in travel plans, (8) changes in facilities, (9) changes in curriculum, (10) changes in teaching methods, (11) effect of proficiency levels attained in FFA contests, (12) changes in recreation, and (13) instructor's perceptions on certain male and female traits.

Findings. The study revealed a mean of 64.7 boys and 7.8 girls enrolled in Idaho vocational agriculture programs in the 1977-78 school year. According to the respondents, girls were found to be more active than boys in FFA. A consensus of the instructors in the survey indicated girls were better in the classroom than boys in the areas of doing reading assignments and keeping notebooks. Differences were detected in the attitudes of girls and boys in the departments surveyed. Very few instructors found major changes necessary in the areas of: travel, facilities, curriculum, teaching methods or recreation. The majority of the instructors indicated girls had not lowered contest proficiency levels. Fifty percent of the instructors indicated competition between sexes is not bad and does not generally hurt students psychologically.

ILLINOIS

BORKE, Lon Douglas. "Comparison by District of the Characteristics of Agricultural Occupation's Teachers and Their Program in the Secondary Schools and Area Vocational Centers in Illinois." Masters Study, 1979, Southern Illinois University, Carbondale.

Purpose. To determine if relationships exist between teacher and vocational agriculture program variables. Determination of such relationships may indicate inservice professional and program needs.

Method. A questionnaire containing 36 Vocational Agriculture program and teacher variables were mailed to 488 Illinois agriculture teachers. Two follow-up mailings produced a 91 percent response rate. In addition to program variables, teachers responded to the importance to their program - of each of the National Vo-Ag program standards. Responses to the 36 program and teacher variables were compared by District and Section. Illinois contains 25 Vo-Ag sections and five districts.

Findings. Location differences were reported for the following variables: Teacher contract length, membership in the IAVAT, membership in the IEA, completion of the Masters Degree and supervision of student teaching. An analysis of the five variables of difference indicated that the teacher with a Masters Degree more often supervised student teachers, was a member of both IEA & IAVAT but had a shorter contract than those not completing the Masters Degree. Recommendations included suggestions for increasing teachers membership in the professional organization, and further study to determine why teachers with advanced degrees held shorter teaching contracts.

DAVIS, Randy J. "Development of a Slide Series on Showmanship of Horses at Halter." Masters Study, 1979, Southern Illinois University, Carbondale.

Purpose. To develop one effective audio visual slide set and supportive narrated script that will increase the ability and knowledge of 4-Hers for horse showmanship at halter.

Method. A review of the United States Department of Agriculture's National Agriculture Library was completed and material reviewed. Based on this and information from selected recognized experts data were formulated and the slide series was developed. The material was then field tested with five 4-H horse clubs in Southern Illinois. A pre-test and post-test was developed and used with the slide series as well as an evaluation by the club leader.

Findings. There were differences in the responses which appeared to be related to the skill and ability of the club leader in the area of horses. There was total agreement, however, by the club leaders that this and other topics presented in the same format would be beneficial to the leader in teaching showmanship. The results of the pre-test and post-test indicated that the 4-Hers did benefit from the effort.

ETHRIDGE, James I. "A Follow-up Survey of Students in Agricultural Education at the University of Illinois." Masters Equivalency Paper, 1979, University of Illinois, Urbana.

Purpose. This study was developed to determine the value placed by graduates and students upon components of their professional preparation.

The study was restricted to those persons who were preparing to teach vocational agriculture in secondary schools, and who graduated during the time period 1974-79 and students who will be student teaching during the Fall of 1979.

Respondents were asked to give selected items of demographic data and were asked to evaluate each course taken as a part of their professional preparation sequence in terms of general value of the course as a preparation for classroom teaching, evaluation of needed teaching activities preparation and degree of that needed preparation. Respondents were also asked to evaluate student teaching experience and preparation in selected teaching activities. A 2 x 1 Chi-Square was employed to test the significance of those respondents who indicated they needed preparation in twenty-two selected teaching activities and the difference between respondents who perceived their preparation as adequate or very good and those respondents who perceived their preparation as somewhat adequate or not very well prepared.

Method. University alumni files were used to locate graduates; questionnaires were developed and mailed to all graduates from 1972-1979. Descriptive statistics were utilized in the main; a 2 x 2 Chi-Square was employed to test the significance of the valued difference between: (1) grade point averages of 40 and over, and grade point averages of 3.99 and below (2) males and females (3) those respondents that attended a community college and those that did not (4) those with a teaching specialty of agriculture production and those with a teaching specialty of horticulture (5) those that are currently teaching and those that are not teaching. The difference tested was their perception of need for preservice education in twenty-two selected teaching activities.

Findings. There was no significant difference between males and females, between community college transfers and non-transfers, between agriculture production teaching specialities and horticulture teaching specialities, between those currently teaching and those not now teaching and between those with a grade point average of 3.99 or lower and those with a grade point average of 4.0 or higher in their perception of needed training in selected teaching activities.

Respondents felt they were prepared in five of the teaching activities. Those were: (a) problem-solving teaching (b) lecture presentation (c) using the demonstration method of instruction (d) writing behavioral objectives and (e) advising Future Farmers of America and youth programs.

Eight of the selected teaching activities were identified by the respondents negatively as needing additional preparation. The teaching activities were: cooperative education on-the-job coordination, maintaining and using a land laboratory, developing individualized experience programs, mainstreaming, maintaining and using a school greenhouse, using ability groups and tracking, conducting parent conferences and developing competency-based programs.

KANE, Rene C. "The Employment Status of Women in Horticulture." Masters Study, December 1978, Southern Illinois University, Carbondale.

Purpose. To determine those factors that significantly influence the educational and professional experiences of women in horticulture.

Method. Nineteen horticulture organizations were contacted for membership lists. From this composite membership list, 1978 members were randomly selected. A mail questionnaire was used to determine attitudes about women and their work and sex roles, reaction to factors or occurrences and information like age, marital status, children and parent's education.

Findings. Professional women in horticulture tend to come from professional families and gave little or no credit to the high school faculty for influence in their career development. The mean salary for women surveyed was greater than the aggregate male work force in the U.S. but substantially lower than that of men with similar educational background. Finally the barrier most often cited by the surveyed women was "not accepted as a professional peer by colleagues".

LEGACY, James W. "Comparison of Traditional and Open Entry Type Materials." Staff Study, 1979, Southern Illinois University, Carbondale.

Purpose. The purpose of this study was to compare traditional and open entry teaching intervals using competency based curriculum materials. These materials were developed from beginning tasks for retail florist.

Method. The field test of the retail floral curriculum was completed by six horticulture teachers and with 100 high school students. Three of the teachers taught the lessons in a block time frame called traditional method and three teachers taught lessons in short time units over a long period of time, open entry type method.

Findings. Early analysis of results indicated increased cognitive and psychomotor learning with the traditional method.

LEGACY, James W. "The Development of an Agribusiness Matrix." Staff Study, 1979, Southern Illinois University, Carbondale.

Purpose. The purpose of this study was to complete and validate a job title matrix for Illinois Agricultural Occupations. The completion of this matrix provides a framework for curriculum development based on industry competencies and a vehicle with which to identify employment need information.

Method. The matrix preliminary job titles were based on a review of literature and by input from advisory committee--industry--consultants. Telephone interviews were then made with Agribusiness firm representatives which produced the agribusiness matrix.

Findings. A matrix of 408 job titles in 52 types of agricultural business was completed. The matrix is available as four bulletins in a pocket folder. The findings of the matrix development suggest that a more clear understanding of Illinois agriculture is currently available as career education to primary and secondary level students.

PEUSE, H. Gene. "Factors Affecting Illinois Vocational Agriculture Secondary School Teachers' Acceptance of an Instructional Unit on International Agriculture." Masters Research Paper, 1979, University of Illinois at Urbana-Champaign.

Purpose. The purpose of this study was first to prepare instructional materials on international agriculture for secondary school vocational agriculture students and then to determine factors affecting Illinois vocational agriculture secondary school teachers' acceptance of an instructional unit on international agriculture.

Method. A one-page questionnaire was sent out to the population of 340 vocational agriculture teachers in Illinois who had received the instructional unit.

Findings. The major findings of the study are as follows: A majority of vocational agriculture teachers plan to teach the international study unit because the subject matter meets existing course or vocational program objectives. A majority of vocational agriculture teachers endorse the publication of a series of international study units provided that the series does not deter Vocational Agriculture Service from producing traditional subject matter materials. The most significant factor affecting teacher acceptance of the international study unit was previous international experience/education.

SO-KARGBO, Momorie. "Factors Influencing the Performance of Agriculture Teachers in Sierra Leone Secondary Schools." Doctor of Education Thesis, 1979, University of Illinois at Urbana-Champaign.

Purpose. The purpose of this study was to identify factors that influence the performance of agriculture teachers and identify factors limiting the quality of agriculture science education in Sierra Leone and to develop policy recommendations for strengthening these programs. These recommendations were submitted to the Ministry of Education.

Method. Survey research involving personal interviews with agriculture teachers and principals in 64 secondary schools in Sierra Leone. Data collection occurred during the period February-June, 1978.

Findings. Major findings of the study are as follows: The type of technical agriculture training received by teachers, as defined by the institution where they received their training, was having a significant influence (.05 level) on their performance in the classroom, as perceived by their principals and based on their own self-assessment of technical competence. The general lack of facilities, equipment and supplies was a major limiting factor to agriculture teachers in providing adequate, school-based experience programs for students to develop practical agriculture skills and knowledge in food crop production and animal husbandry.

STITT, Thomas R. "Standards For Quality Agricultural Occupations Programs in Secondary Schools and Area Vocational Centers. Phase II." Staff Study, 1979, Southern Illinois University, Carbondale.

Purpose. The primary purpose of this study was the implementation of the standards validated by the Illinois Agricultural Occupations teachers in Phase I of this project. It also involved the preparation of materials to be used by agricultural teachers in a review and evaluation of their local agriculture program.

Method. Booklets composed of the standards validated by Illinois Agricultural Occupations teachers were prepared for use. Three columns were added to each page and labeled "exceeds standards", "meets standards", and "does not meet the standard", to facilitate the checking of each standard when used. Also, space was provided under each standard to write observations and then recommendations for the standard if the local situation needed improvement. Distribution of these materials to all agricultural teachers was made through the 25 sectional chairpersons who gave instructions on their use.

INDIANA

CAMP, William G. "Development of Instrument, 'Survey of Discipline Problem Behaviors'." Staff Study, 1978, Purdue University, West Lafayette.

Purpose. The purpose of this study was to develop and validate a survey instrument to measure perceptions of student discipline problem behaviors.

Method. An extensive list of specific student misbehaviors was developed from an examination of educational literature on student discipline dating from 1924 to 1978. The list of misbehaviors was edited to improve clarity and remove duplications. The initial list was submitted to a panel of judges for revision and validation. The result of the foregoing process was 101 specific student misbehaviors, including but not limited to discipline problem behaviors, which are of general concern to educators. Instructions were developed asking the respondent to check those items which he perceives to be problems in discipline as opposed to problems in some other area. He is then asked to rate each previously checked item using a 5-point Likert scale in terms of frequency of occurrence, level of seriousness, and degree of interference caused by the behavior if or when it should occur. The instrument was field tested on a small group for readibility and ambiguities, then slightly revised and field tested again on a larger group (N=50). No further revisions were found to be necessary.

Findings. The instrument was judged to be a valid measure for its stated purpose and was found to be quite functional. After utilizing it on a large sample of teachers, it was found that there was some minor confusion with one part of the instructions; also, four additional behaviors have been suggested for the list. Accordingly, the instrument is being slightly revised for future use; although it has already been accepted by Purdue Research Foundation for copyrighting and marketing.

CAMP, William G. "Student Discipline: An Analysis of Indiana Educator Perceptions." Staff Study, 1979, Purdue University, West Lafayette.

Purpose. The purposes of this study were to determine the following:

1. What specific student behaviors are perceived by Indiana educators to be problems in discipline as opposed to problems in some other area?
2. How frequently do those identified discipline problems occur in Indiana schools?
3. How serious are the problems perceived to be?
4. How much does each behavior interfere with the learning process?

Method. The instrument detailed previously, "Survey of Discipline Problem Behaviors," copyright 1979, Purdue Research Foundation, was mailed to a stratified random selection of Indiana secondary level professional school personnel (N=1086), along with a stamped return envelope. Three weeks later, a follow-up letter was mailed to non-respondents. A total of 310 usable instruments were returned.

Findings. All the behaviors listed were perceived by substantial numbers of professional educators to be disciplinary in nature. The lowest ranked behavior was student activism, perceived by 12.1% of teachers and 28.0% of administrators to be disciplinary in nature. The highest ranked behavior was ambivalence, perceived to be a problem in discipline by 79.4% of teachers and 60.0% of administrators. Of the 101 behaviors, 46 were perceived by all teachers to be discipline problems, 62 by vocational agriculture teachers, and 45 by administrators. General conclusions were as follows:

1. Although much is written about student discipline, little is known about it.
2. It may not be possible to develop a consensus list of perceived or real discipline problems by surveying line educators.
3. Any irritating student behavior may be perceived by large numbers of educators to be a discipline problem.
4. Problems perceived to be most serious tend to occur least frequently whereas the most frequently occuring problems tend to be relatively passive and non-destructive in nature.

CAMP, William G. "Performance Based Curriculum Development for Disadvantaged and Handicapped Students." Staff Study, 1979 Purdue University, West Lafayette.

Purpose. This project was designed to:

1. develop a model for modifying VTECS performance based curriculum into PBVE learning activity modules for special needs vocational students;
2. establish an appropriate format for the modules;
3. develop field test, revise, and prepare for printing 20 PBVE learning activity modules for special needs vocational students.

Methods. Existing VTECS task analysis catalogs were utilized to provide the outline for each module. Each module was set up to handle a single task from the catalog and each performance guide step under the selected task was utilized to provide one or more concrete activity(ies) for the module. The modules were designed for use in a tri-modal manner - i.e. teacher-centered (classroom) instruction, student-centered (individualized) instruction, and a combination of both approaches. The completed module contains the following components:

1. Cover sheet, listing:
    a. job titles from VTECS catalog,
    b. duty (under VTECS job titles),
    c. task (under VTECS duty)
    d. activities (performance guide steps under VTECS task);
2. Prerequisite skills and knowledge;
3. Vocabulary words;
4. Curriculum guide, designed for teacher use and containing
    a. unit of instruction,
    b. student objectives,
    c. suggested learning activities,
    d. evaluation,
    e. tools, equipment and supplies;
5. Activity sheets, corresponding exactly to activities listed on cover sheet;
6. Overhead masters.

Findings. The panel of ten teachers who field tested the first 10 modules found the format to be very useful. Several found that the student-centered approach fit their needs best. One teacher used the teacher-centered approach. The remaining teachers used the combination approach wherein classroom instruction was followed by laboratory work using the activity sheets with minimal teacher supervision. The general conclusions were as follows:

1. Materials are needed to supplement traditional references for use with special needs students;
2. The tri-modal format is more acceptable to teachers than either teacher-centered or individualized instructional materials;
3. VTECS catalogs can be utilized directly with minimal changes in the construction of curriculum materials for use by special needs vocational students.

MOORE, Gary E. "Perceptions of Vocational Agriculture Teachers Concerning Sex Discrimination in the Teaching of Agriculture." Staff Study, 1979, Purdue University, West Lafayette.

Purpose. The purpose of this study was to determine if female vocational agriculture teachers have been discriminated against in securing teaching positions.

Method. A mail questionnaire was sent to a nationwide sample of 100 randomly selected female vocational agriculture teachers. The same questionnaire was sent to a sample of 100 male vocational agriculture teachers who had been matched to the females on state and year of entry into teaching. The questionnaire was designed to gather demographic data on teachers and measure their attitudes on selected variables. Three mailings of the instrument resulted in a 75 percent response rate.

Findings. Thirty-eight percent of the females indicated they had been discriminated against in their efforts to find a teaching job because of their sex. However, the number of jobs applied for did not differ significantly between males and females. The females had applied for 2.4 jobs, received 2.0 interviews and were offered 1.3 jobs. The males applied for 2.1 jobs, had 1.7 interviews, and were offered 1.6 jobs.

PARK, Joseph; HAMILTON, W. H. "A Study of Teacher Attitude Towards the I.V.A.T.A." Staff Study, 1979, Purdue University, West Lafayette.

Purpose. The purpose of the study was to investigate the attitudes of Indiana vocational agriculture teachers towards their professional association to provide information for improving the service to the membership.

Method. The population of teachers was divided into three groups based on the most active group, those who belonged but were not active, and those who were non-members of the association.

A 20 question attitude survey questionnaire was mailed to members of each of the three groups.

Chi-Square was used as the statistic to measure any difference in attitudes between the groups.

Findings. No significant differences between the groups were detected on any of the attitude items.

RICHARDSON, William B.; MOSS, Jeffrey W.; STRAIN, Kathleen E. "Curriculum Development in Landscaping for Vocational Horticulture Programs." Staff Study, 1979, Purdue University, West Lafayette.

Purpose. The purpose of this project was three-fold:

1. Develop curriculum material for the area of landscaping by utilizing the VTECS (Vocational Technical Educational Consortium of States) catalog validated for Indiana through a proposive study conducted in 1977.
2. Conduct a task analysis of the validated tasks for the landscaping job title, "A Landscape Gardener."
3. Derive learning content for instruction based on each analyzed task.

Method. This project was the first curriculum development study in the area of horticulture using Indiana's performance based approach. Task analysis was performed by using "Task Analysis for Performance Based Vocational Education" as a guide. The learning content derived from subtasks is part of the performance-based approach currently being tested in Indiana. The following steps were followed in the process of developing the curriculum material.

1. The project staff with the input of the advisory committee and job incumbents sequenced the validated tasks to allow for orderly preparation of curriculum materials.
2. Each validated task was analyzed using guidelines specified in "Task Analysis for Performance Based Vocational Education."
3. Learning content was derived for each task analyzed using guidelines provided by Dr. B. R. West, Indiana's VTECS Coordinator.
4. The project writing team then developed performance based tests for each task domain area following the guide set forth by the Indiana State Board of Vocational Education.

Findings. This project serves to provide curriculum materials developed under the performance based approach for implementation at the secondary level. The materials will be evaluated by Indiana Vocational Horticulture instructors and will help alleviate a shortage of curriculum material in the area of horticulture.

RICHARDSON, William B.; MOSS, Jeffrey W.; STRAIN, Kathleen E. "Purposive Study and Curriculum Development In Nursery Operators." Staff Study, 1979, Purdue University, West Lafayette.

Purpose. The four major objectives of this project were as follows:

1. Validate the tasks contained in the job title using a purposive study as outlined in the VTECS Technical Reference Handbook.
2. Survey job incumbent personnel in horticulture as a secondary validation of the job title catalog.
3. Sequence the tasks that are validated into a systematic arrangement to facilitate further work in instructional materials development.
4. Conduct a task analysis of the verified tasks for performance based curriculum development.

Method. "Task Analysis for Performance Based Vocational Education" was used by a working committee to review an initial task list and by the project staff in conducting an analysis of the validated task list. Determination of tools used, tasks performed, and time spent on each task was conducted by using the VTECS Program Survey Data Analysis System. The following is a list of the procedures used.

1. A working committee and project staff prepared a survey instrument for validating the tasks for the job title, "Nursery Worker."
2. Surveys were sent to job incumbent personnel selected from an earlier survey sent to horticulture businesses.
3. Survey data was tabulated and analyzed permitting a sequential arrangement of tasks.
4. A task analysis was performed using the guidelines in "Task Analysis for Performance Based Vocational Education."
5. The project writing team then grouped the tasks into domains and developed performanced based tests for each of the domains. The Indiana Board of Vocational Education provided the guidelines for the development of these tests.

Findings. This project provided a list of validated tasks used in the nursery business. The curriculum material developed from these tasks is to provide the guidelines for conducting learning experiences for students preparing for occupations in the nursery industry. This curriculum material will most likely provide for further development of quality instructional materials for use in vocational horticulture programs.

RICHARDSON, William B.; NIEMINEN, Jerrold A. "Development of an Employer Follow-Up Model of Former Vocational Students." Staff Study, 1979, Purdue University, West Lafayette.

Purpose. The purpose of this project was to identify, develop and test instruments, methodologies and analysis for providing feedback from employers relative to the performance of former vocational students in the labor market. This problem is manifested by the need to include employer input into the process for providing feedback relative to the effectiveness of vocational education programs.

Method. The research team organized a project advisory committee. A thorough review of the literature was conducted. The researchers designed a model for employer follow-up per former vocational students. Components of the model include: computerized data collection instruments, a sequential modular follow-up process, procedures for reviewing non-respondents, a computerized data summary format, and a "How to" handbook. This model was field tested in LEA's in Indiana.

Findings. The outcome of this project is a simple usable model for follow-up of employers of former students. The model includes a systematic process, valid methodology, computerized instruments, and computer data summary techniques.

STRICKLAND, R. M. "A Comparative Analysis of Agricultural Mechanics Education in Indiana: Perceptions of Vocational Agriculture Teachers and Teacher Educators on Selected Skill Needs and Pre-Service and In-Service Training." Ph.D. Thesis, Purdue University, West Lafayette.

Purpose. This study was designed to determine if the pre-service and in-service needs of teachers of Agricultural Mechanics are being met by the Teacher Education program in Indiana.

Method. Secondary schools offering courses in Agricultural Mechanics in Indiana were surveyed. A usable response rate of 68% was obtained. A non-response bias sample proved inconclusive. A mailed survey was used to collect the data. The Chi Square statistic was used to test for significant interactions among the variables, a Cramer's V was computed to determine the degree of association between variables showing significant interaction, and Tau c was used to determine whether the variables were positively or negatively correlated and at what significance level. The independent variables: number of years of teaching experience, degree possessed by the teacher, teaching certification, hours per day agricultural mechanics was taught, and the number of agricultural mechanics courses, were compared to the agricultural mechanics skill area rankings and the agricultural mechanics skills: ranking, whether or not the skill was needed by a teacher of agricultural mechanics, and where the teacher had learned the agricultural mechanic skill.

Findings. The agricultural mechanics skills that the teachers ranked the highest were those skills which they possessed the most knowledge about. The number of years of teaching experience was directly related to the number of teachers who had learned the agricultural mechanics skill while on-the-job. Teachers with a Bachelors degree tended to have learned more skills through pre-service and in-service training than did teachers with a Masters degree. Teachers with a permanent teaching certification indicated a higher level of knowledge about an individual skill than did teachers who possessed a provisional teaching certification. Generally, the more hours per day agricultural mechanics was taught, the more knowledge the teacher possessed about a skill and the larger the percentage of that knowledge that was obtained on-the-job. The more agricultural mechanics courses a school had the more knowledgeable the teacher was for all of the skill areas.

IOWA

AANONSON, Donald W. "Factors Related to Occupations of Male Graduates of the Britt Community High School." M.S. Thesis, 1979, Iowa State University, Ames.

Purpose. The purpose of this study was to determine factors related to the occupations of male graduates who had been graduated from Britt Community High School during the time period of 1968 through and including 1977.

Method. Lists of all Britt Community High School male graduates for the years 1968 through and including 1977 and their present mailing addresses were developed by the investigator. A questionnaire was developed by the investigator and mailed to 368 graduates. Responses were received from 293 graduates (79.6 graduates).

Findings. Of the graduates studied, 47.6% were engaged in non-agricultural occupations, 26.0% were employed in agricultural occupations, and 26.3% were enrolled in post-high school education programs. Of those employed in agricultural occupations, 15.0% were engaged in farming and 11.0% were employed in agribusiness occupations.

Census classification of the graduates occupations revealed that 15.0% were engaged in farming, 14.0% were employed as laborers, 10.9% were employed as craftsmen, 6.8% were classified as professionals, and 6.8% were employed as managers and office help. Of the remaining graduates, 5.8% were employed as operatives, 5.1% were in service occupations, 3.7% were engaged in sales occupations, 2.4% were employed in clerical occupations, 2.4% were in the military service, and 2.4% were unemployed.

Of those graduates engaged in nonfarm agricultural occupations, 54.1% were employed in farm implement and equipment occupations, 20.8% were employed in feed and grain occupations, 10.4% were employed in the fertilizer and nursery industry, and 6.2% worked in livestock related occupations.

GAY, Roger L. "Importance of Selected Vocational Agriculture Teacher Occupational Tasks as Perceived by Virginia Principals and Vocational Agriculture Teachers." M.S. Thesis, 1979, Iowa State University, Ames.

Purpose. The purpose of this investigation was to: 1) identify those important occupational tasks that are basic to teaching vocational agriculture as perceived by teachers and their principals in Virginia, and 2) compare the perceptions of these groups with the perceptions of like groups in Iowa.

Method. Seventy-one program activities were generated by teacher educators and state supervisors of agricultural education, local high school superintendents and principals and vocational agriculture teachers. Forty-nine (22.9% of all programs) Virginia and 85 Iowa (29.7% of all programs) secondary school principals and their vocational agriculture teachers, using a 99 point scale, expressed the degree of importance they felt the activities were to the successful performance of the teachers occupational role.

Findings. Major findings included the following: (1) mean hours per week that Virginia teachers felt they should devote to program activities during the school year was 44.5 hours, whereas for Iowa teachers they felt they should spend 51.4 hours per week at occupational tasks, (2) paired t-tests conducted on each of the 71 program activities resulted in 18 significant t-values for the Virginia groups, whereas 37 significant paired t-tests were found for the Iowa groups, and (3) t-tests conducted on the 71 program activities between like groups (Virginia and Iowa principals and Virginia and Iowa vocational agriculture teachers) resulted in 37 significant t-values between principal groups and 44 significant t-values for the teacher groups. Among those activities rated as being most important by the Virginia group included: maintaining a facility which is conducive to learning; developing good working relations with the administration, faculty, and staff; and keeping abreast of current agricultural developments.

HASSELMAN, Elvin E. "Perceptions of Educational Needs as Expressed by Northeast Iowa Veterans." M.S. Thesis, 1979, Iowa State University, Ames.

Purpose. It was the purpose of this study to determine the effectiveness of selected Agriculture Production Programs for veterans in Iowa in fulfilling the intent of Public Law 90-77. The specific objectives of the study were to: (1) determine how effective students within six Northeast Iowa area school districts felt the instruction they had received in the Agriculture Production Program had been in meeting farming program needs, (2) identify implications that might effect future adult agriculture programs for veterans, and (3) recommend procedures and practices that would improve the veterans agriculture production program in Iowa.

Method. A random sample of 643 veterans enrolled in thirty-six classes of six area schools in northeast Iowa expressed their degree of agreement or disagreement with the extent to which they felt the program they had been of assistance to them in 74 program areas. Responses were collected through group interviews during regular class sessions providing a 100 percent respondent response.

Findings. Respondents agreed that activities in the instructional, supervision, organizational, and supply and equipment program areas had been most effective in meeting their instructional needs. Activities in the evaluation program area were those indicated by the respondent as being of least value in meeting their instructional needs. Activities for which respondents expressed strongest agreement toward their usefulness in meeting their educational needs were: 1) conducting field trips to local businesses, using field trips as a teaching technique, and using agricultural films to teach on current topics.

HILLYARD, Landen L. "Educational Needs of Adult Farmers in the West Liberty Community School District." M.S. Thesis, 1979, Iowa State University, Ames.

Purpose. The purpose of this study was to determine the agricultural education needs of adult farmers in the West Liberty Community School District and identify needs that should be dealt with in the West Liberty Adult Agriculture Program.

Method. A questionnaire was sent to 100 randomly selected farmers in the West Liberty School District. The questionnaire sought information on the respondents understanding of 68 different agricultural topics and demographic data on each respondent. Completed questionnaires were received from 61 farmers.

Findings. Major findings included the following: 1) topics in the area corn, soybean, and oat production were most understood by the farmers studied, 2) topics in sheep production were least understood by the respondents, 3) electricity and civil liabilities topics were least understood in the agricultural mechanics and farm management areas, 4) no significant difference existed between the mean responses for those who had attended West Liberty Adult Agriculture classes and those who had not, and 5) no significant differences were observed between topic mean scores when grouped by age of respondent.

HILTON, James W. "Perceptions of Vocational Agriculture Instructors and Superintendents Concerning Vocational Agriculture Summer Programs in Iowa." Ph.D. Dissertation, 1979, Iowa State University, Ames.

Purpose. The purpose of this study was to determine the attitudes of teachers and superintendents concerning the summer programs of vocational agriculture in Iowa.

Method. Data were collected, using a three part mailed questionnaire, from a random sample of Iowa teachers and their superintendents. Data centered upon the attitudes of respondents toward selected summer program activities, the allocation of time to groups of summer program activities, and selected demographic information.

Findings. Major findings of this study included the following: 1) teachers and administrators placed a high degree of importance on summer program activities, 2) teachers and administrators were in agreement as to the importance of summer programs as an integral part of vocational agriculture programs, 3) teachers and administrators were not in agreement concerning certain groups of selected summer program activities, namely: teacher professional growth activities, teacher administrative activities and teacher involvement in agricultural organizations and associations, 4) teachers and administrators were not in agreement concerning the allocation of time to groups of teacher summer program activity, significant differences were found for five areas; instructional improvement, agriculture organizations and associations, supervised occupational experience (SOE) program, resource improvement and teaching activities, 5) teachers and administrators agreed that the teacher did not need to teach formal classes during the summer to justify 12-month employment, 6) the majority of teachers were hired on a 12-month contract.

HOLMES, Timothy L. "Perceptions of Principals and Vocational Agricultural Instructors toward Selected Summer Program Activities in Florida." M.S. Thesis, 1979, Iowa State University, Ames.

Purpose. The major purpose of this study was to examine the attitudes of principals and vocational agriculture instructors regarding selecting summer program activities. A secondary purpose was to determine if the perceptions of the subgroups differed toward these activities.

Method. High School principals and vocational agriculture instructors of secondary comprehensive high schools in Florida which offered vocational agriculture programs during the 1978-79 school year constituted the population for the study. A random sample of 75 schools was selected; therefore, a total of 150 individuals were identified and included in the sample. A three-part instrument listing selected summer program activities was used.

Findings. Major findings included the following: (1) forty-seven of the 63 selected activities were identified by respondents as those activities which should be conducted during the summer. (2) Teachers and principals were in basic agreement as to the importance of teachers conducting the selected activities during the summer. Significant differences ($p = < .05$) were observed for only 11 of the 63 items. (3) Respondents in the subgroups were in general agreement as to the number of days which should be devoted to each of eight major areas of responsibility that teachers have during the summer. About one-fifth of the days were devoted to conducting SOE program activities, which was greater than for any of the other areas.

JANSSEN, Danny D. "Relationship of School Size to the Importance of Stressing Basic Skills in Vocational Agriculture Programs." M.S. Thesis, 1979 Iowa State University, Ames.

Purpose. The purpose of this investigation was to ascertain the perceived importance of stressing value and basic skill concepts as a part of vocational agriculture programs in high school districts of different sizes as perceived by selected educators, parents, and students.

Method. Seventeen local educators, parents, and students were selected from thirty-six public secondary schools in the state of Iowa to respond to the importance of 15 value, 37 language arts, and 13 mathematical concepts as a part of the vocational agriculture program. A response scale of 1 to 99 was provided as a guide for respondents to use in placing importance values on each concept. Responses were collected from 570 of 612 study participants (93.1%). Based on data supplied by the Iowa Department of Public Instruction, schools were grouped according to size for comparing purposes in this study.

Findings. Respondent concept mean scores were not observed to be different when they were compared by school size group. All respondents in each of the four school size groups perceived the importance of stressing value and basic skill concepts as a part of the vocational agriculture program as average or above average in importance.

A comparison of total composite mean scores for stressing value and basic skill concepts revealed that, in the main, stressing values was considered most important in the vocational agriculture program. The ability to write effectively was perceived to be the least important by most of the respondent groups. Stressing mathematics and language arts skills and values concepts tended to be more important in the smaller schools.

KRUCKENBERG, Duane W. "Attitudes Toward Agricultural Occupational Employment Experience Program at the Iowa Falls High School." M.S. Thesis, 1979, Iowa State University, Ames.

Purpose. The purpose of this study was to identify the attitudes of students, employers, parents, faculty and graduates toward the agricultural occupational employment experience program (AOEE) as a component of the vocational agriculture program at Iowa Falls Community High School.

Method. The population for the study included former AOEE students, AOEE employers, the high school faculty, currently enrolled AOEE students and parents of current and former students. The total population of these five groups was considered the sample for this research. An instrument containing forty-six attitude statements with a five-point responses scale (1 = strongly disagree to 5 = strongly agree) and biographical questions was developed and mailed to each individual in the five groups.

Findings. Seventy percent of the former AOEE students were employed and 30 percent were continuing their formal education. Ninety percent of the former AOEE students who were employed were working in agricultural occupations. All of the AOEE employers believed the AOEE program benefitted their businesses and said they would be interested in employing another AOEE student. A majority of the school faculty felt that the AOEE program did not disrupt "normal operations" of the school and indicated the program should be maintained or expanded. Parents of AOEE students were happy with the AOEE program. A majority of the current AOEE students said they enrolled in the program to learn a trade or to earn money. Significant differences were observed among the five groups of respondents on 12 of the 46 AOEE attitude variables, indicating a lack of agreement among the response groups on these 12 items. No significant difference was detected among the groups for 36 of the items, indicating agreement in these ways in their attitude toward the program.

LOCKMANN, Allan F. "Perceived Importance of the Agriculture Resource Management Principle in Agriculture and Agribusiness Education." M.S. Thesis, 1979, Iowa State University, Ames.

Purpose. The purpose of this study was to determine the perceived levels of importance by selected educational policymakers, instructors, and students toward the concept of agriculture resource management in planning of agriculture and agribusiness education in Iowa.

Method. To measure the perceived importance of stressing agriculture resource management in agriculture and agribusiness education, an instrument was developed and mailed to eight hundred randomly selected respondents--one hundred in each of the following groups at the secondary and two year post-secondary levels: (1) nonagricultural teachers, (2) principals, (3) board of education members, (4) state supervisors of agricultural education, (5) superintendents, (6) agricultural teachers educators, (7) senior students in high school vocational agriculture programs and freshmen and sophomore post-secondary agricultural programs, and (8) agricultural teachers. All groups surveyed were drawn from Iowa with the exception of state supervisors and teacher educators who represented a national sample. An 80% response was obtained.

Findings. Major findings included the following: (1) the agriculture resource management principle was an important concept in agriculture and agribusiness education as expressed by all groups studied, (2) there were differences in perceived importance of the agriculture resource management principle among groups studied with state supervisors and teacher educators rating the importance higher than all other groups studied, and (3) including the use of records in establishing goals for the management of resources was rated most important by all groups whereas, emphasizing the role of bargaining in the free enterprise system was considered least important by all groups studied.

ROWE, Andrew E. "Importance of Occupational Tasks as Perceived by Arizona and Utah Principals and Vocational Agriculture Teachers." M.S. Thesis, 1979, Iowa State University, Ames.

Purpose. The purpose of this study was to: (1) identify those occupational tasks that vocational agriculture teachers and principals perceived as basic to teaching vocational agriculture in Arizona, and (2) compare the perceptions of these groups with the perceptions of a neighboring state with a low rate of teacher turnover.

Method. Seventy-one program activities were generated by teacher educators and state supervisors of agricultural education, local high school superintendents and principals, and vocational agriculture teachers. Thirty-five Arizona and 37 Utah secondary school principals and their vocational agriculture teachers, using a 99 point scale, expressed the degree of importance they felt the above activities were to successful performance in the teachers occupational role.

Findings. Major findings included the following: (1) 34.3% of the Arizona and 40.5% of the Utah pairs studied were in schools with multiple man vocational agriculture departments, (2) mean school size for the Arizona group was 1140.5 students and the mean size of schools for the Utah pairs was 865.9 students, (3) activities rated most important by the Arizona groups included: developing good working relationships with administration, faculty, and staff; conducting a FFA chapter; completing local school district reports and records; continually revise and update curriculum; maintaining an accurate inventory of departmental supplies, tools, and equipment; taking a two week vacation, or whatever is contracted; attending school staff meetings; keeping abreast of current agricultural developments; completing state reports; maintaining an appropriate filing system; and teaching high school classes on agricultural subjects.

SHARSHAR, Abdel-Hameed Amin. "Evaluation Criteria for the Process of Planning County Extension Programs." Ph.D. Dissertation, 1979, Iowa State University, Ames.

Purpose. The purpose of this study was to develop an evaluation guide for the process of planning county extension programs based on perceptions of county extension directors, extension home economists, and extension youth leaders in Iowa toward selected criteria.

Method. A questionnaire containing 83 possible planning evaluation criteria was developed by the investigation. The questionnaire was mailed to thirty county extension directors, extension home economists, and county youth leaders in counties that employed a person in all three groups. A 100% response was received by the investigation.

Findings. Major findings included the following: (1) 68% of the respondents held B.S. degrees, 31% held M.S. degrees and one held a Ph.D. degree, (2) mean years experience in program planning was 16.8 years for the director group, 6.9 years for the home economist group, and 6.2 years for the youth leader group, (3) of the 83 criteria studied, 52 were recommended as criteria for evaluating the process of planning county extension programs. These criteria fell under six broad dimensions of extension program planning, and (4) county extension staff members, appropriate extension specialists, and local leaders should be involved in planning county extension programs.

WUBBEN, Neil M. "Perceptions of Selected Groups Toward the Role of the Vocational Agriculture Program in Meeting the Imperative Needs of Youth of Secondary School Age." M.S. Thesis, 1979, Iowa State University, Ames.

Purpose. The purpose of this study was to examine how selected groups of educators, parents, and students perceived the role of the high school and vocational agriculture program of study in developing the imperative needs of secondary school youth.

Method. Thirty-six data collection sites were randomly selected from the school districts in the State of Iowa conducting vocational agriculture programs. At each site, seventeen educators, parents and students were asked to indicate their perceptions as to the degree of importance for stressing the imperative needs of youth in the high school and vocational agriculture programs of study. Data were collected using the group-interview method.

Findings. Stressing the imperative needs of students was of average importance or above in the high school program of study and below average importance or above in the vocational agriculture program of study. The need for stressing the development of salable skills and those attributes that make the worker an intelligent and productive participant in our society was observed to be of major importance in both programs as perceived by all groups. The need for stressing knowledge of purchasing and using goods and services intelligently was perceived to be more important to the vocational agriculture program of study. To develop an appreciation of the beauty in literature, art, and music and to cause the student to realize his or her capacity for creativity in the fields of literature, art, and music were perceived to be least important by all groups in both program settings.

YODER, Benjamin A. "Effect of Previous Agricultural Mechanics Training or Achievement in a Basic Metals and Welding Course at Iowa State University." M.S. Thesis, 1978, Iowa State University, Ames.

Purpose. The purpose of this investigation was to determine the effects of previous training in agricultural mechanics upon achievement of students enrolled in Agricultural Mechanics 254. A second purpose was to determine factors that effect performance in Agricultural Mechanics 254, a basic metals and welding course at Iowa State University.

Method. Students enrolled in Agricultural Mechanics 254 during fall and winter quarter of 1977-1978 at Iowa State University comprised the research sample of 204 students. Ten laboratory sections of Agricultural Mechanics 254 were taught during fall quarter and six sections were taught during winter quarter with seven instructors involved in the study. Data were collected from three sources, those being (1) a survey administered during the final week of each quarter, (2) a mechanical aptitude test given during the first week of winter quarter and (3) laboratory, lecture and course totals obtained from each instructor involved in the study.

Findings. Students who had received high school instruction in vocational agriculture and industrial arts did not perform significantly better than those who did not. Students who had high school vocational agriculture received lower laboratory, lecture, course, and aptitude scores compared to nonvocational agriculture students. Laboratory, lecture, course and aptitude scores were higher for students who had received high school instruction in industrial arts compared to those who did not. Students who had received high school instruction in agricultural mechanics, oxy-acetylene welding, arc welding and hot and cold metals did not perform significantly better than those who did not.

ZUMBACH, Galen R. "Importance of Selected Occupational Activities of Vocational Agriculture Teachers as Perceived by Colorado and Utah Principals and Teachers." M.S. Thesis, 1979, Iowa State University, Ames.

Purpose. It was the purpose of this study to identify those occupational tasks that are basic to the teaching of vocational agriculture as perceived by Colorado principals and their vocational agriculture teachers and compare the perceptions of these groups with the perceptions of like groups in a state with low annual vocational agriculture teacher turnover rate.

Method. Seventy-one program activities were generated by teacher educators and state supervisors of agricultural education, local high school superintendents and principals, and vocational agriculture teachers. Forty-five Colorado and 37 Utah secondary school principals and their vocational agriculture teachers, using a 99 point scale, expressed the degree of importance they felt the above activities were to successful performance in the teachers occupational role.

Findings. Major findings included the following: (1) 75.6% of the Colorado pairs were employed in schools with multiple teacher vocational programs, (2) 71% of the Colorado schools involved in the study had enrollments not exceeding 480 students, (3) paired t-tests conducted on each of the 71 program activities studied resulted in 25 significant t-values for the Colorado group and 22 significant t-values for the Utah group, (4) those activities rated most important by the Colorado pairs included: taking two week summer vacation; maintaining an accurate inventory of department supplies, tools and equipment; maintaining an appropriate filing system; maintaining a facility which is conducive to learning; making necessary program changes as a result of evaluation; continually revising and updating curriculum; and keeping abreast of all OSHA regulations which would affect the agriculture program and students; utilizing the daily preparation period for high school class instructional preparation.

KANSAS

BOWIE, Kenneth E. "The Identification of Technical Agricultural Competencies and the Levels Where They Should be Taught in Agriculture Education Programs in Peru." Ph.D. Dissertation, 1979, Kansas State University, Manhattan.

Purpose. The purpose of this study was to identify technical agriculture competencies and where they should be taught in agriculture education programs in Peru.

Method. An instrument was developed which included 75 technical agriculture competencies in nine competency categories: agriculture economics, agronomy, animal science, dairy science, poultry science, entomology, horticulture, agriculture mechanization, and food processing Levels where the competencies should be taught included primary (grades K-6); secondary (grades 7-11); technical institutes, university (four-year course of instruction); and extension education. A 115-member jury of experts composed of Agriculture Educators, Agriculture Practitioners, and Agriculture Administrators responded to the importance of the competency items, and where each should be taught.

Findings. Sixty-three of the 75 competency items received ratings of 3.5 or higher on a 5 point scale. Sixteen items had mean scores of 4.0 or higher, 47 had mean scores between 3.5 and 3.9, 11 had mean scores between 3.0 and 3.4, and one item had a mean score of 2.8. There were 35 significant differences for 375 comparisons (75 competencies x 5 levels) which were significant at the .05 level of significance for the level of instruction.

DA SILVA, Jose E. "Professional Education Competency Needs for Elementary and Secondary Agriculture Education Teachers in Northeast Brazil." Ph.D. Dissertation, 1978, Kansas State University, Manhattan.

Purpose. The purpose of this study was to ascertain the professional education competencies perceived to be needed by elementary and secondary agriculture education teachers in northeast Brazil.

Method. An instrument was developed with 100 competency items in ten educational categories: program planning; instructional planning, execution, management, and evaluation; guidance; school-community relations; student vocational organizations; professional role and development; and cooperative education. The questionnaire was completed in Brazil by 105 respondents in five groups; elementary school directors, secondary school directors, teacher educators, elementary agriculture education teachers, and secondary agriculture education teachers.

Findings. The findings of the study indicated that there was a large number of similarities in the levels of proficiency required for and attained by elementary and secondary agriculture education teachers in regard to the 100 professional education competencies. There were no significant differences in the perceptions of the respondents as to the importance of the 100 competencies for the agriculture education teachers in Brazil.

REILLY, Phillip W. "Analysis of Factors Which Encourage Vocational Agriculture Teachers in Kansas to Remain in Teaching." Master of Science Thesis, 1979, Kansas State University, Manhattan.

Purpose. -- The purpose of this study was to identify factors which might encourage retention of vocational agricultural teachers in Kansas.

Method. — Kansas vocational agriculture teachers served as the population for the study. A survey instrument was developed to be distributed to these teachers at their area vocational teacher meetings. The instrument consisted of 41 encouragement factors and selected demographic data. The vocational agriculture teachers were stratified by their intent to teach for the 1979-80 school year. The mean value of the encouragement factor of those teachers who planned to remain in teaching and those who plan to leave teaching were compared on each encouragement factor.

Findings. -- A significant difference between the mean values for the factors of the teachers who plan to remain in teaching and those who plan to leave was determined on the following factors: 1) helping students to mature and learn is satisfying to me as a teacher; 2) I like living in the community of the size and type in which I live; 3) most students in my school respect teachers; and 4) the achievements of my students in FFA competition more than compensate me for the extra hours I spend training them. Teachers who planned to remain in teaching rated the following factors highest as encouraging them to remain in teaching: 1) I enjoy working with people; 2) I enjoy being close to work associated with the farm; 3) I enjoy working with young people; 4) I enjoy the chance to work outdoors; 5) I enjoy working with other vocational agriculture teachers; 6) I enjoy the variety of subject matter taught in vocational agriculture; 7) helping students to mature and learn is satisfying to me as a teacher; 8) I enjoy living in the community of the size and type in which I live; 9) I enjoy being able to guide and counsel students; and 10) I enjoy working on FFA activities. Teachers planning on leaving teaching rated the following factors lowest as encouraging them to remain in teaching: 1) most students in my school respect teachers; 2) I receive adequate compensation for the extra hours and evenings I work; 3) I believe the fringe benefits of my job are similar to those of other professionals with equal training and years of service; 4) the help I receive from student aides makes my job less demanding; 5) I believe my salary is similar to that of other professionals with equal training and years of service; and 6) discipline problems in my school are insignificant.

SLOCOMBE, John W. "A Study to Determine the Relationship of Selected Factors on FFA Membership of Vocational Agriculture Students." Master of Science Thesis, 1979, Kansas State University, Manhattan.

Purpose. The purpose of this study was to secure information from randomly selected sophomore and senior vocational agriculture students to determine the relationship selected factors and their participation in the FFA.

Method. A survey instrument was developed which included 20 items which could have an influence on participation in FFA activities. The questionnaire was sent to 304 vocational agriculture students in 14 randomly selected vocational agriculture departments in Kansas. A comparison was made of the responses from 242 students who were FFA members, and 22 who were not members of the FFA. Factors included in the survey involved school support, community support, instructor involvement, number of FFA activities, and student attitudes toward vocational agriculture and the FFA.

Findings. The findings of the study indicated that the vocational agriculture students who were FFA members rated 28 of the 29 factors significantly higher than the non-FFA members.

STREIT, Leslie D. "An Analysis of Competencies Needed by Educational Technologists in Six Occupational Settings." Ph.D. Dissertation, 1979, Kansas State University, Manhattan, Kansas.

Purpose. The purpose of this study was to determine the differences which existed for the importance of eighty professional competencies needed by educational technologists.

Method. Data was collected through a survey instrument developed from competencies identified by a task analysis of the educational technology profession and revised by several national AECT committees on certification and program development. A sample size of 441 was utilized to rate the importance level of each of the eighty competencies. The respondents represented six occupational settings: business/industry, government/armed forces, medical institutions, colleges and universities, school systems (K-12), and community junior colleges/vocational technical schools.

Findings. The range of importance for competencies in each of the six occupational settings was very similar and a large majority of the competencies were rated as "important." An exception occurred where the business/industry and the government/armed forces respondents rated the management functions of personnel and organization significantly lower than the other four groups of respondents. Media generalists had the largest diversity of competencies needed. Educational degree attainment made some difference on competency importance for the functions of design, utilization, evaluation-selection, and research-theory. Level of experience had little effect on competency importance.

TIBBS, John E. "A Comparison of the Lecture and the Independent Study Methods of Teaching Grain Storage on the Farm." Master of Science Thesis, 1979, Kansas State University, Manhattan.

Purpose. The purpose of this study was to compare the Lecture and the Independent Study methods of instruction for teaching grain storage to farmers.

Method. Lesson plan materials on grain storage on the farm was prepared by the author. Sixteen randomly selected farmers from Udall, Kansas participated in the study. The farmers were randomly divided into two groups with eight farmers receiving instruction by the lecture method, and eight farmers completing the lesson plan assignments independently in their homes. Farmers were tested following completion of the lessons.

Findings. The mean test scores for the lecture method (79.5%) was higher than for the independent study method (72.5%). The differences were not found to be significant. Neither were there significant differences found in the test scores due to factors of age, acres, bushels, education, farm experience, and grain storage experience. However, there were significant relationships for test scores and bushels stored; age with education, farm experience and grain storage experience; acres with bushels stored; education with farm experience; and farm experience with storage experience.

LOUISIANA

ALLEN, Larry David. "Selected Influences on Attrition Rates from Vocational Agriculture Programs in Louisiana." Ph.D. Dissertation; August, 1979, Louisiana State University; Baton Rouge.

Purpose: The primary objective of this study was to determine the effect of race, grade level, academic classification, economic status, and student activity involved on the non-reentry and dropout rates of students enrolled in vocational agriculture in Louisiana. This study was also designed to determine if there was a correlation between the degree of chapter FFA activity and dropout and non-reentry rates of students enrolled in vocational agriculture.

Method: The descriptive method of research was utilized in this study using the inquiry technique. An initial questionnaire was sent to 40 vocational agriculture teachers selected at random from throughout the state. This questionnaire attempted to gain information related to FFA activities of the local chapter and specific characteristics of students who either dropped out of the school system prior to graduation or who left the vocational agriculture program after completing only one or two courses.

A second questionnaire was mailed to 79 non-reentry students and 50 dropouts. These persons were selected at random from lists supplied by respondents to the initial questionnaire. Data were analyzed by frequency and percentage distribution, chi-square, mean, range, and coefficients of correlation. All data were tested under the null hypothesis with significance levels being set at .05.

Findings: Chi-square analysis of non-reentry students showed roll, grade level, economic level, and academic classification to be significant factors associated with dropouts. Non-reentry students reported scheduling problems as the most common reason for not remaining in the program. Reasons for dropping out of school completely included lack of interest, economic need, and inability to get along with teachers. The study disclosed a slight negative correlation (-.3295) between dropout and non-reentry students and FFA chapter activity.

Based upon the results of the study, the following recommendations were made: (1) FFA Foundation awards should be used to provide incentive and recognition to students, (2) Instruction should be designed to more fully meet student needs, (3) Administrators should attempt to remedy schedule conflict problems to allow more students to reenter the program, (4) Participation of students in home projects should be increased, (5) Vocational guidance and counseling should be provided to all students, and (6) Participation in FFA activities should be encouraged.

KOTRLIK, Joe W. "The Role of the High School Vocational Agriculture/Agribusiness Program in the Occupational Success of Graduates." Staff Study, 1979, Department of Vocational Agricultural Education, Louisiana State University, Baton Rouge.

Purpose: The purpose of this project was to determine the role of Louisiana vocational agriculture/agribusiness programs in the occupational success of graduates as perceived and reported by graduates. Also, the project was designed to secure the reaction of program graduates to recent and proposed changes in the vocational agriculture/agribusiness program.

Method: A survey instrument designed to secure information regarding the program graduates' current employment status, employment success, program quality, current salary levels, and other related information was mailed to all graduates of twenty-four randomly selected vocational agriculture/agribusiness programs. After a follow-up questionnaire was mailed, a phone follow-up of all non-respondents was conducted. Two hundred fifty-two out of the 289 graduates in the sample were secured, an 87 percent response. Descriptive statistics, chi-square analyses, and multivariate analyses were secured.

Findings: The program is perceived as being highly successful by the graduates as indicated by their responses to statements designed to evaluate the program. Four percent of the group surveyed were unemployed as compared to an unemployment rate of over 8 percent for Louisianians in their age group in the general population. The average income of the graduates was in the $11,000 to $15,000 category as compared to less than $9,000 which is the average individual income for employed persons in Louisiana. Few of the graduates had participated in adult education programs conducted by the local program of vocational agriculture/agribusiness. When the phone follow-up responses were compared to the mailout responses using chi-square, statistically significant differences at the .05 level were detected on all demographic characteristics of the respondents with the exception of sex of the respondents. Significant differences were also detected between the phone follow-up and mail responses with regard to the graduates evaluation of the program.

SMITH, Charles W. "Cognitive and Affective Benefits of a Career Development Course." Staff Study, 1979, School of Vocational Education, Louisiana State University, Baton Rouge.

Purpose: The purpose of this study was to determine whether selected cognitive and affective differences existed between high school students who enrolled in a one semester career development course and those who did not enroll.

Method: A career development course was organized to be taught over a period of 18 weeks by a teacher-counselor. The course focused on the following content areas: (1) the valuing process; (2) interpretation of personal test data; (3) the decision making process; (4) career information and reality testing experiences; (5) individual career exploration and planning; and (6) employment and work adjustment skills.

The experimental group consisted of five self selected classes of tenth, eleventh and twelfth grades. An equal number of students was selected as a control group. Pre and posttest were administered to both the experimental and control groups. Criterion measures used were the Career Development Attitude Inventory and the Career Development Inventory. Both instruments were designed specifically for this course and were based on the cognitive and affective objectives delineated in the course outline. Data analysis was designed to test the null hypothesis between the experimental and control groups on the criterion measures of attitudes toward selected career development concepts and knowledge of selected career information. Pretest scores and aptitude test scores were used as covariates in the analysis of variance design.

Findings: When the adjusted mean attitude scores toward selected career development concepts were compared for total test items, significient differences were found at the .01 level of significance in favor of the experimental group. Similiarly, when the scores by test item group were compared, significant differences were found between the experimental and control groups.

When the adjusted mean test scores on cognitive information were compared, significant differences were found at the .01 level of significance in favor of the experimental group. However, when the adjusted mean test scores by test item group were compared, significant differences were found to exist for only the occupational information test item group and the employment seeking skills test item group. No differences were found for the decision making and occupational choice test item group and the self awareness test item group

SMITH, Charles W. and J. C. Atherton. "Pounding the Pavement -- Employment Seeking Skills." Staff research project, 1979, Louisiana State University, Baton Rouge.

Purpose. The purpose of this project was to make readily available to the vocational instructor and guidance counselor materials that may be utilized in assisting students acquire employment seeking skills.

Method. The procedures followed in providing subject matter materials were:

1. Review materials currently available
2. Using an advisory group, determine teaching aids needed but not currently available
3. Prepare aids needed for developing employment seeking skills
4. Develop a teaching module format
5. Develop teaching modules
6. Field test materials and evaluate results
7. Put materials in final form and reproduce them.
8. Inservice personnel from each LEA and then disseminate materials to each LEA, and each vocational-technical school in Louisiana

Findings. The following materials were produced: Six filmstrips with accompanying cassette tapes, 60 color transparencies and seven self-contained modules namely: You and the World of Work; Identifying Job Openings; Completing Application Forms; Application Letters, Resumes and Testing; The Job Interview; Getting Along on the Job; and Planning for Continuing Education.

UDO, Sunday U. "Land Laboratory Use in Teaching Vocational Agriculture in the Southern United States with Implications for Agricultural Education in Nigeria." Ph.D Dissertation, May 1979, Louisiana State University, Baton Rouge.

Purpose. The primary purpose of this study was to identify the various dimensions, concepts, and factors which influence the use of the school land laboratory in the Southern United States and in the country of Nigeria. The study was conducted to provide guidelines for making recommendations for improving school land laboratory use in Nigerian agricultural education programs.

Method. The descriptive survey method of research was used. A mail questionnaire was utilized to gather information from identified teachers with on-going school land laboratories in twelve southern states and in Nigeria. Data were collected from 69 American and 26 Nigerian teachers. The questionnaire was developed following a review of pertinent literature, a survey of other data collecting devices, and suggestions from the graduate committee and a jury of experts. In presenting and tabulating the data, frequency and percentage distributions, averages and graphs were used. Data were reported in terms of American findings and Nigerian findings.

Findings. The study indicated that the use of school land laboratories in Nigeria is on the increase. All Nigerian teachers responding to the questionnaire believed the land laboratory to be an important or very important part of the program. Major problems identified by the Nigerian teachers included equipment and supplies, financial support, low status of agricultural education in the school system, and lack of cooperation or support from the government or the local school administration. It is interesting to note that 65.4 percent of the Nigerian teachers indicated that agricultural education programs were regarded as being of little or no importance.

Responding American teachers indicated that the average size of their school land laboratories was 41.3 acres with almost half of the group reporting laboratories between one and ten acres in size. Land was most frequently used for forestry, garden crops, row crops, and field nurseries. The most difficult problems faced by the teachers concerned equipment and supplies, facilities, finances, and vandalism.

Recommendations of the study are summarized as follows: (1) Definite plans, policies and objectives for the operation of school land laboratories in Nigeria should be formulated. Funding of programs should be provided through the Ministry of Education. School land laboratories should be used to demonstrate practical skills and practices to both students and adult farmers in the community. (2) Programs of agricultural education in Nigeria should be vocational in nature. This would involve training students for a wide variety of agricultural occupations. Instruction should begin with the basic or general skills and proceed to the more specialized and specific skills. Provision should be made for placement of students in supervised experience programs outside of the school setting.

MINNESOTA

BRACEWELL, Earl W. "A Comparison of Characteristics of Agricultural Land Sale Applicants in Matanuska-Susitna Borough, Palmer, Alaska." Masters Study, University of Minnesota, 1978.

Purpose. The purpose of this study was to describe characteristics of land sale applicants especially those who were successful in purchasing a parcel. The specific questions were: (1) are there significant differences between applicants who apply for small land parcels and those who apply for large parcels as measured by knowledge, attitude, evaluation of future farming success, and biographical data; and (2) are there significant differences between successful and unsuccessful applicants as measured by the same variables.

Method. Data was gathered from land sale applicants using five instruments: Confidential Biographical Data, Accounting Principles, Farmer Attitudinal Inventory, Economic Principles, and Application to Borough Agricultural Land.

Findings. The study time frame did not result in a large sample which resulted in an obvious limitation. Successful large parcel applicants were found to be significantly more innovative in their approach to management of a farm business.

KEITH, Donald Merle. "An Evaluation of the Internship of the Agriculture Division of the University of Minnesota, Crookston as Perceived by Student Participants." Masters Study, University of Minnesota, 1979.

Purpose. The purpose of this study was to determine how students who had participated in the Internship Program perceived it and if there were any differences in the perceptions of the students just graduated and those already in the work force.

The objectives were to determine students' perceptions of the internship experience relating to: retention of these students in college: the intership's effect on scholastic achievement; if the internship objectives were being met; the value of the internship program in the curriculum; and changes needed in the internship program.

Method. A questionnaire relating to the above objectives was prepared using a Likert scale. A questionnaire was sent to all students that had completed their internship program between the spring quarter of 1976 and summer quarter of 1977. There were 213 questionnaires sent with a 65.7 percent return. The questionnaires were returned by 83 graduates judged to be in the work force for about one year. The remaining 57 respondents were recent graduates in the processes of job search. A t-test was applied to determine if there was a significant difference in the responses to two groups.

Findings. There were two items in the questionnaire that showed a significant difference in the responses of the 1976 and the 1977 interns. The newly graduated interns disagreed to a greater degree that:

1. The instructors' involvement in the internship program made classes more pertinent.
2. The college does a better job of placement because of the internship program.

In all other items there was no significant difference in the way the 1976 and the 1977 interns responded.

The respondents felt: the internship does not aid in the retention of student in college; grades of students are not affected by the internship experience; all but one of the objectives as stated in the Student Internship Handbook were appropriate; the internship program was a very important part of the curriculum; and there were some changes needed in the internship program.

LESKE, Gary W., SALEM, M. Nagi, and PETERSON, Roland L. "An Analysis of the Work Load of Adult Farm Management Instructors in Minnesota." Research and Development Series No. 6, University of Minnesota, 1978.

Purpose. The purpose of this study was to determine how many hours per week adult farm business management instructors spend on the job, the distribution of time by job function, variations in the work load between months, the relationship between selected biographical characteristics and time spent on the job, and the relationship between time spent on the job and productivity as measured in terms of number of farm business analyses completed.

Method. This survey study involved the 78 adult farm business management education teachers devoting 100 percent time to the adult program. The time reporting instrument was designed to allow teachers to log minutes spent on each of 24 job formation categories for a period of one week. The time reporting period was one week in each of the five months January through May. Biographical data was collected indirectly from available data sources. Summary statistics, correlation, and analysis of variance were utilized in presenting the results.

Findings. The average adult farm management instructor reported spending 51 hours per week on the job; however, this average time varied from 57 hours in January to 44 hours in May.The nature of work activity varied from month to month. On-farm instruction occupied a major portion of the instructors time, ranging from 70 percent in January to a low of 42 percent in May. The ranges for the percentage of total time spent each week in each of the reporting months for selected functions were: teaching adult farm management classes, 8.0 to 9.8 percent; teaching enterprise, young farmer and agricultural mechanics classes, 9.5 to 13.1 percent; teaching high school "VoAg FFA," 8.0 to 19.4 percent; planning lessons, 8.5 to 13.6 percent; obtaining and preparing aids, and maintaining school facilities, 4.2 to 25.4 percent; attending professional meetings and travel, 9.7 to 15.0 percent; participating in non-teaching activities in the local school, 6.5 to 11.7 percent; participating in community services, 6.2 to 9.3 percent: and performing administrative responsibilities, 4.0 to 8.3 percent.

There was a significant relationship between average total time spent on the job and the number of farm records analyzed by instructor-cooperators. Teachers with Masters degrees enrolled significantly more farm businesses than those who did not possess a Masters degree, 57.3 versus 44.8. They also analyzed more records than those who did not possess Masters degrees, 47.2 versus 34.7.

MUMFORD, Sabra Ann. "The Role of the University Supervisor of Student Teachers as Perceived by Members of Their Role-Set in Selected Secondary Schools in Maine." Ph.D Dissertation, University of Minnesota, 1978.

Purpose. The purpose of this study was to determine the relationship between perceptions held by university supervisors and other role-set members regarding the role of the university supervisor; to determine whether or not perceptual differences exist, and to determine those differences and define a role description for university supervisors.

Method. The data was collected through the participation of 72 percent of the university supervisors, 51 percent of the cooperating teachers, and 52 percent of the student teachers from four of the University of Maine systems. The Q-technique was the method used in order to make comparisons between first and second-order perceptions of the three groups regarding the role of the university supervisor. It consisted of a normal curve continuum of nine columns with a 42 card Q-deck of roles of the university supervisor. Participants rank ordered the statements in different perceptual frames of reference.

Data was analyzed using analysis of variance and Scheffe's Post Hoc Comparison. An analysis of individual items was also used to determine the behaviors considered most and least important to the role of the university supervisor.

Findings. The general conclusions were:

1. The three groups generally agree on the role of the university supervisor.
2. University supervisors expect the role behaviors as they perceived them are those which student teachers would have them perform.
3. Cooperating teachers expect university supervisors to have some perceptions about the role of the university supervisor different from perceptions university supervisors actually hold.
4. Student teachers expect university supervisors to hold perceptions about the role of the university supervisors similar to those university supervisors hold.
5. University supervisors expect cooperating teachers and student teachers would have them assume some role behaviors in contrast to those which university supervisors believe should be fulfilled by university supervisors.
6. The three groups are in complete agreement on the most important and the two least important roles of the university supervisor.

SALEM, M. Nagi and COPA, George H. "Education for Agriculture in Minnesota: Public Institution Programs, Students and Follow-up". Division of Agricultural Education, University of Minnesota, 1978.

Purpose. The purpose of this study was to provide answers for the following: (1) what are the agriculture education programs being provided through public institutions, (2) how large are these programs in terms of students served, (3) what do program leavers do, particularly in terms of employment and further education.

Method. Institutions providing agriculture education from secondary schools through Graduate School were identified and contacted to obtain data that were compiled in the report. Data was organized in a format which includes: (a) program description, (b) sources of data, (c) process used to collect data, (d) other data available, (e) special characteristics of data base, (f) data table, and (g) selected observations from data tables.

Findings. Number of graduates may be quite different than total enrollment since programs vary in length from a few hours to several years. Comparison of data between institutions is very difficult because different institutions collect data in different ways and do not define terms consistently. The result of the study even with its limitations, should be useful to both producers and consumers of agricultural education programs.

SMITH, Clyde A. "The Present and Future Roles of Computers in Adult Farm Management Education." Masters Study, University of Minnesota, 1979.

Purpose. The paper examined the present and future roles of computers in adult farm management education, with particular reference to Minnesota.

Method. Personal questioning of those involved in applying computer technology to farm management education was the main method of inquiry.

Findings. Computers have been used for some years to process farm records sent by mail.

The use of computers in an interactive, problem-solving mode is increasing. Farmers and instructors have favorably evaluated the computer decision aid programs accessed via a time-sharing network to assist farmers in making decisions. The most frequently used program compared alternative, long range farming programs.

The paper contends that the scope for CAI in adult farm management education is limited, but that computerized game-simulations should be developed because of their instructional value.

The main constraints limiting the application of computers in adult farm management education are the instructors' lack of experience with computer programs; the lack of suitable programs, especially programs for a small computer; and difficulty of accessing a computer.

It was recommended that computer technology should be given more emphasis in the University training of potential agricultural instructors; that the University develop suitable programs for small computers, that school boards equip adult instructors with portable terminals so that they can access the computer during farm visits; and that a nucleus of instructors experienced with using the decision-aid programs be used to train other instructors.

The paper forecast that each farm would have a small, on-farm computer in the future for assisting with day to day control of farm operations, for long term planning and to provide a data bank of information to monitor and control the farm business.

MISSISSIPPI

HYLTON, Richard M. "A Study of the Self-Perceived Teaching Effectiveness of Vocational Agriculture/Agribusiness Teachers in the Southern Region of the United States." Master of Science Thesis, 1979, Mississippi State University, Mississippi State.

Purpose. The purpose of this study was to determine and compare the self-perceived teaching effectiveness of vocational agriculture/agribusiness teachers in the Southern region of the United States.

Method. The population consisted of all vocational agriculture/agribusiness teachers in the secondary schools in the Southern region. A sample of 336 teachers was studied. Returns on a mailed questionnaire were received from 212, or 63.0 percent, of the sample. The instrument obtained selected biographical and professional information and assessed self-perceived teaching effectiveness on 39 commonly performed competencies. Statistical techniques included frequencies, crosstabulations, and measures of central tendencies. The chi-square test for independence and the Kruskal-Wallis one-way analysis of variance were used in data analysis. The Kruskal-Wallis test was used to determine if significant differences existed between the ratings on the competencies and selected biographical and professional information.

Findings. The following were concluded about the teachers of vocational agriculture/agribusiness in the Southern region of the United States: (1) Those teachers who have received the educational specialist degree had higher mean ratings on competencies of teaching effectiveness than those with baccalaureate and masters degrees, (2) Those teachers who received their baccalaureate degrees from 1890 Morrill Act land-grant colleges or universities or nonland-grant colleges or universities had higher mean ratings on competencies of teacher effectiveness than those who received their degrees from 1862 Morrill Act land-grant colleges or universities, (3) Those who were enrolled in vocational agriculture/agribusiness in high school perceive themselves higher on competencies of teacher effectiveness than those who were not enrolled, (4) Past membership in the FFA has helped self-perceived teaching effectiveness, especially in the competency area of FFA, (5) The number of years of practical work experience in agriculture/agribusiness before teaching has little effect on self-perceived teaching effectiveness, and (6) Black teachers perceive themselves higher on many of the competencies than the white teachers.

POLSON, Karl O. "A Study of Selected Agricultural Mechanics Jobs Taught by Teachers of Vocational Agriculture in Mississippi." Master of Science Thesis, 1979, Mississippi State University, Mississippi State.

Purpose. The purpose of this study was to determine perceptions vocational agriculture teachers have of actual and recommended time for instruction of selected agricultural mechanics jobs in Mississippi vocational agriculture programs. The study had two objectives: (1) to determine instructional time allocated to teaching selected agricultural mechanics jobs in Mississippi vocational agriculture programs, and (2) to determine instructional time recommended for the instruction of selected agricultural mechanics jobs in Mississippi vocational agriculture programs.

Method. The objectives were accomplished through use of a mailed questionnaire soliciting demographic data and data related to actual and recommended periods of instruction in 16 agricultural mechanics job categories. One hundred forty-six agricultural mechanics jobs and 17 "other" jobs were listed.

Findings. Data were received from 51, or 68 percent, of 75 randomly selected teachers. Both mail and telephone follow-ups to non-respondents were used to secure responses. Findings of this study included: (1) Four, or 7.8 percent, of respondents did not report teaching any mechanics jobs. (2) Seven, or 13.7 percent, of respondents reported teaching jobs in all job categories. (3) No respondent reported teaching all the selected mechanics jobs. (4) All selected agricultural mechanics jobs, except "other," were taught during 1978-1979. (5) Every mechanics job except "other" was recommended for instruction by at least one teacher. (6) Lack of time, other jobs more important was reported by selected teachers for each of the jobs except "other." (7) Skill is not needed in this community was reported by selected teachers for every job category except concrete and masonry, and agricultural power and machinery: internal combustion engines. (8) Need for more teacher training was reported by selected teachers for each of the 16 job categories. (9) Inadequate equipment was reported by selected teachers for each of the 16 job categories. (10) Inadequate facilities was reported by selected teachers for each of the 16 job categories.

MISSOURI

DUREE, James F., "Microform and Audio-Tape Compared in Presenting Occupational Information to Ninth Grade Students." Dissertation, Ph.D., 1979. University of Missouri-Columbia.

Purpose. The purpose of this study was to compare the effectiveness of microform and audio-tape in presenting occupational information to ninth grade students of differing levels of reading ability with regard to (1) informational achievement, (2) learning time, and (3) student preference.

Method. The media utilized in this study were (1) microform, a presentation where students received the information by microfilm aperture cards and (2) audio-tape, a presentation where the students received the same information by audio-tape cassette-cartridges. A two-way analysis of variance was conducted for measurements of informational achievement and time for Cluster 1 and then for Cluster 2. Student preference was tested by chi-square. A point-biserial correlation and a t-test were used to analyze the relationship between reading ability and preference.

Findings. Based on the findings of the study, the following conclusions were drawn:

1. Students who received the microform treatment consistently required significantly less time to complete each occupational cluster than those who received the audio-tape treatment.
2. Students in the microform treatment did not consistently score significantly higher on informational achievement for each occupational cluster than those who received the audio-tape treatment.
3. The data indicated that significantly greater number of students preferred microform to audio-tape.
4. The high reading ability students from both the microform treatment and the audio-tape treatment consistently scored higher on informational achievement and consistently required less time than their low reading ability counterparts.
5. A significant positive correlation existed between reading ability and student preference. The data indicated the high reading ability level students preferred microform over audio-tape.

NAKASINGH, Samusa, "Leader Behavior Expected of Vocational School Directors in Missouri." Dissertation, Ph.D., 1979. University of Missouri-Columbia.

Purpose. The purposes of the study were: (1) to determine whether or not significant differences existed in the expectations of leader behavior of the area vocational school director on the Initiating Structure and Consideration scales of the Leader Behavior Description Questionnaire when rated by three groups, the superintendents, the vocational teachers and the directors; and (2) to determine whether or not significant differences existed in the expectations of leader behavior of the area vocational school director when rated by groups of vocational teachers and compared on the basis of the demographic variables of age, sex, level of formal education, years of occupational work experience and years of professional experience in education.

Method. The population for this study consisted of the area vocational school directors, superintendents and vocational teachers in the non-urban vocational schools in Missouri during the school year 1977-78. The sample for the study consisted of 20 randomly selected area vocational school directors, the 20 superintendents and the 315 vocational teachers who worked with them. All data were collected by the use of a mailed questionnaire. Twenty usable responses were received from the directors, 20 from the superintendents and 227 from the teachers. The Leader Behavior Description Questionnaire (LBDQ), developed by the Personnel Research Board at The Ohio State University, was used as the instrument for this study. An analysis of variance was utilized as the statistical tool for testing the null hypotheses at an alpha level of .05.

Findings. Based on the data collected and analyzed for the study, it was found: (1) that no significant differences in the expectations of the desired leader behavior of the vocational-technical school director existed among superintendents, vocational teachers and directors in Missouri, and (2) that no significant differences in the expectations of desired leader behavior for the area vocational-technical school director existed among the groups of vocational teachers when compared on the basis of age, sex, years of occupational work experience and years of professional experience in education. However, a significant difference did exist among teachers when grouped on the level of formal education completed.

SWANSON, John B., "Leadership Behavior of Advisors and Future Farmers of America Chapter Effectiveness." Dissertation, Ph.D., 1979. University of Missouri-Columbia.

Purpose. Recent research in business and industrial management in addition to that conducted in the fields of psychology and sociology found that the behavioral style of leaders was related to productivity and to organizational effectiveness. The purpose of this study was to ascertain if relationships existed between the leadership style of Future Farmers of America (FFA) chapter advisors and FFA chapter effectiveness.

Method. The population for the study consisted of the 94 FFA chapter advisors in Missouri in single teacher vocational agriculture departments with from 30-80 members who had been in their present school positions for more than one year during the 1978-79 school year. A random sample of 35 teachers was selected from the population for use in the study. Variables included were: 1) years of teaching experience, 2) "consideration" scores, 3) "initiating structure" scores, and 4) chapter effectiveness scores. The Chapter Activity Record, a researcher developed instrument, was completed by the chapter advisor. Data were plotted on scattergrams and since linearity was noted, the Pearson r was used as the appropriate correlation statistic. Significance of the correlation coefficients was ascertained by comparison to critical values. A t test was used to test for significant differences between the variables as predictors of chapter effectiveness. An alpha level of .10 was used to evaluate significance in all procedures.

Findings. Significant relationships were found to exist between: 1) "initiating structure" scores of advisors and FFA chapter effectiveness, 2) "consideration" and "initiating structure" scores of advisors, and 3) variables as predictors of chapter effectiveness with the "initiating structure" correlation coefficient being primarily responsible for the level of significance. No significant relationships were found to exist between: 1) "consideration" scores of advisors and chapter effectiveness, 2) years of teaching experience and chapter effectiveness, or "consideration" scores, or "initiating structure" scores, and 3) "consideration" scores and years of teaching experience as predictors of chapter effectiveness.

MONTANA

BOE, Nels E. "A study of Extension Service Advisory Committees in eleven Western States and in Montana." Master of Science Professional Paper, 1979, Montana State University, Bozeman.

Purpose. It was the purpose of the study to compare the methods used by county extension agents in the 11 western states and Montana when establishing local advisory committees. A further comparison was made among these extension agents to determine the training they provided for their committee members and the techniques they used to maintain their councils.

Methods. A questionnaire was developed and mailed to 55 extension agents in the 11 state area and all of the agents in Montana. A 95-96%-return was realized within a three week period. The data from these questionnaires were assembled and analyzed.

Findings. The most significant findings of this study were: (1) Advisory councils assist extension agents to identify the program areas on the needs of people in their counties. (2) When selecting advisory councils extension agents regard training in communications, diffusion process, and social action process as important selection criteria. (3) Training of the member of the advisory council, after appointment to the extension advisory council, in the social action process, the diffusion process, and communications was not provided by the respondents of the study. (4) County agents who operate their program with help from advisory councils regard many kinds of assistance as important help in identifying program areas and topics. (5) The study revealed that agents who operate their extension program with an advisory council do so with agriculture and home economics backgrounded persons. Leadership was also an important trait that agents watched for when selecting advisory committee members. (6) Although 4-H is an important part of the extension programs teenagers are members of advisory committees only in a few of the counties.

BRUWELHEIDE, Kenneth L. "Toxic Metal Compounds Present in Montana Secondary School Laboratory - Shops." Staff study, 1979, Montana State University, Bozeman.

Purpose. The purpose of this study was to determine the types of toxic metal compounds that are present in instructional laboratories.

Method. A questionnaire was sent to 233 instructors seeking data pertaining to (A) Toxic materials used in instructional, metal working laboratories, (B) The amount of time students and instructors are in contact with potentially dangerous metals, (C) Metal working skill areas taught in which students and instructors may come in contact with toxic metal substances, (D) Safety precautions, specifically ventilation systems, provided in laboratories in areas where potentially dangerous metals and their oxides are used and (E) Incidence of illness or other complaints possibly caused by exposure to toxic substances by students.

Findings. The data indicate that instructors and students are exposed to toxic metal substances for sufficient periods to create a health hazard. The major sources of metal oxides in the laboratories are; welding, soldering-brazing, heat treating, and forging.

CLAYTON, Roger B. "A Follow up of 1969,71,73,75 and 1977 Graduates of the College of Agriculture at Montana State University" Master of Science Professional Paper, 1979, Montana State University, Bozeman.

Purpose. The purpose of this study was to assess the educational experience of the 1969 to 1977 graduates of the College of Agriculture while at Montana State University and the impact of those experiences on their ensuing careers.

Method. A mailed questionnaire sent to 240 graduates was used to obtain data pertaining to; past and present educational status, reasons for choosing MSU College of Agriculture, employment, mobility, and adequacy of degree titles. The remainder of the questionnaire pertained to the stated objective of the College of Agriculture.

Findings. It was found that development of technical skills was adequate but development of professional competencies was inadequate and that it was becoming increasingly more difficult to provide adequate educational programs. There was an overall decline in the learning environment as evidenced in poorer ratings for facilities and services in all areas. Student-Administrative rapport was less than satisfactory with indications that students should have more opportunity to participate in the administrative process. Graduates were generally satisfied with their overall education in terms of employment opportunity.

SHELHAMER, C. Van "Educational and Demographic Changes in Secondary Vocational Agriculture and Home Economics in Montana as a Result of Title IX." Master of Science Professional Paper, 1979, Montana State University, Bozeman.

Purpose. The objectives of the study were to determine (A) If student attitudes toward personal success are affected by enrollment of the opposite sex in a traditional class, (B) If participation by the opposite sex in a traditional class will influence individual participation of the traditional sex, (C) The level of leadership exerted by the opposite sex to enroll in a traditional male or female club, (D) The motivating factors causing the opposite sex to enroll in a traditional class, (E) If teaching and evaluation methods were being changed because of enrollment of the opposite sex in a traditional class and, (F) If changes had been made in facilities to meet the needs of all students.

Method. A questionnaire was mailed to 24 vocational agriculture instructors and 24 home economics instructors in Montana. One hundred and twenty vocational agriculture students and 148 home economics students were questioned.

Findings. The research indicates that non-traditional students are not strongly encouraged nor are they discouraged from enrolling. The principle opposition to enrollment is from friends and parents. Attitude of the females toward the opposite sex has an influence upon their performance in class. Females are more active in the youth organizations.

Vocational agriculture teachers have not made significant changes in teaching methods while the home economics teachers have made numerous changes to accommodate non-traditional students.

NEBRASKA

DILLON, Roy D. and Allen G. BLEZEK. "Final Project Evaluation-Implementation of the Nebraska Core Curriculum For Vocational Agriculture." Staff Study, 1978, University of Nebraska-Lincoln.

Purpose. The purpose of the study was to determine the extent to which vocational agriculture teachers in Nebraska utilized the Nebraska Vocational Agriculture Curriculum.

Method. A ten question instrument was mailed to all vocational agriculture teachers in Nebraska. One hundred three or a 67 percent return was received, representing seven of the eight NVAA Districts.

Findings. (1) Overall attitude toward the Core Curriculum Concept: On a scale of 1= poor to 10 = excellent, all 103 teachers rated the concept as "5" or higher, with sixty-eight teachers scoring the core concept as "8" or higher. (2) Extent of use of teacher materials for the current year: Sixty nine teachers used Core I teacher materials 50 percent or more of the instructional time, 47 used Core II, 36 used Core III, and 37 used Core IV, 50 percent or more of the instructional time. (3) Extent of use of student core materials for the current year: Forty three teachers used Core I student materials 50 percent or more of the instructional time, 27 used Core II, 22 used Core III, and 22 teachers used Core IV 50 percent or more of the instructional time. (4) Anticipated use of Teacher Core during 1978-79: Eighty teachers planned to use the teacher's Core I 50 percent or more of the instructional time, during 1978-79, 62 plan to use Core II, 63 plan to use Core III, and 63 plan to use the teacher's Core IV 50 percent or more of the instructional time. About 98 percent of the respondents plan to use the teacher's core materials to some extent. (5) Anticipated use of student core materials during 1978-79: Sixty-four teachers plan to use the student Core I 50 percent or more of the instructional time during the 1978-79 school year, 59 plan to use Core II, 45 plan to use Core III, and 42 plan to use Core IV 50 percent or more of the instructional time. About 75 percent of the respondents plan to use student Core materials to some extent. (6) Effectiveness of the field in-service sessions dealing with the Core: On a scale of 1 = Ineffective to 10 = Very Effective, Seventy-five teachers rated the in-service sessions as "5" or higher, with 27 teachers rating the sessions as "8" or higher. (7) Usefulness and practicality of the Core approach with local schools: On a scale of 1 = Impractical to 10 = Practical, ninety-three teachers rated the Core approach as "5" or higher, with 55 teachers rating the Core concept as "8" or higher. Considerable comment response was received from teachers concerning suggestions and problems.

DILLON, Roy D. "Identification of Factors Influencing Vocational Agriculture Teachers to Leave Teaching." Staff Study, 1978, University of Nebraska-Lincoln.

Purpose. The major purpose of the study was to identify the factors which influenced agricultural education graduates of the University of Nebraska-Lincoln (UNL) to leave teaching during the five year period 1969-1974.

Method. Twenty-six UNL graduates who resided in Nebraska were interviewed personally. This was 100 percent of those former teachers who began teaching and quit during the five year period, and who resided in Nebraska. Only six teachers who began and quit during the five year period left the state.

Findings. Eighteen factors were given by the 26 respondents in the top five reasons for quitting teaching. The five reported most often were: (1) Too much preparation required for classroom teaching, (2) Long hours, (3) Students lacked interest, (4) Opportunity to join family farm business, (5) Time required for FFA activities. Of the 26 teachers who quit during the period, 17 were in farming or ranching.

NEW JERSEY

DRAWBAUGH, Charles C., and LOCANDRO, Roger R. "The Demographic Variables of the New Jersey Hunter Education Program and Selected Demographic Variables of Students on Knowledge and Attitude Scores About the Sport of Hunting." Staff Study, 1978, Rutgers, The State University of New Jersey, New Brunswick.

Purpose. The overall objective of the study was to evaluate the effects of the New Jersey Hunter Education Program and selected demographic variables of students on knowledge and attitude scores about the sport of hunting. Nine hypotheses were formulated and tested statistically.

Method. The sample consisted of eleven classes representative of the hunter education program in the State. A total of 297 potentially new hunters completed all of the data for the research project. Prior to receiving eight hours of instruction on hunter education, the candidates completed a paper and pencil knowledge examination and an attitude inventory. After the instruction, the knowledge examination and the attitude inventory were administered again as a post-test. Demographic data were gathered on age, sex, hunting licenses held previously, wildlife magazines received in the home, and number of hunters in the home. Data were analyzed statistically by analysis of variance, paired t-tests, and correlational techniques at the Rutgers Center for Computer and Informational Services.

Findings. Among the 19 findings were the following: (1) All classes were significantly more knowledgeable about hunting after receiving than before receiving instruction; (2) The number of hunters in the home did not influence significantly the gain in knowledge scores among participants; (3) The number of wildlife magazines received in the home did not influence significantly the knowledge scores of participants; (4) Prior to receiving instruction, participants 22 years of age and over were more knowledgeable about hunting than those 13 to 21 years of age, participants 13 to 21 years of age were more knowledgeable about hunting than those 12 years of age or less; (5) There was a positive difference from pre-attitude to post-attitude scores among classes; (6) Gain in attitude scores as a result of instruction by females was significantly greater than it was for males; and (7) There was a significant relationship between the pretest knowledge scores and the pre-attitude scores, likewise, there was a significant relationship between the post-test knowledge scores and the post-attitude scores. Knowledge and attitude of participants about the sport of hunting were interrelated. The reason listed on the questionnaire which appealed most to the aspiring hunters about the sport was that it offered an opportunity to enjoy the out-of-doors.

NEW YORK

KAKU, HIROKI. The Palau Community Action Agency, Agricultural Development: A Case Study. Thesis M.S., 1979. Cornell University. 187 p. Library, Cornell University, Ithaca, NY 14853.

Purpose. Evaluation of an economic development program which used vegetable cultivation as a tool to accomplish objectives of the Palau Community Action Agency.

Method. A review of literature, construction of interview schedules and conducting interviews with an identified population who are connected with the Shimizu project.

Findings. The Palau Community Action Agency (PCAA) utilized vegetable cultivation to improve the economic condition of Shimizu village people. Project farmers joined the project on their own volition and increased their income considerably.

Shimizu farmers could not fully satisfy existing demand for vegetables in Koror, the district center of Palau. Thus, staff in stores and cafeterias were dissatisfied with the project. In contrast, staff in the PCAA and other government offices have been satisfied with the economic improvement of project farmers.

The number of social and cultural activities by farmers decreased in Shimizu because the population was very small and houses were scattered in a large area. However, the pattern of family life changed very little. Major changes were the children's contribution to their family farm as workers and the husbands' initiative in vegetable crop production.

The need for continuous extension services was critical for improved farming. The number of animals should be increased. The Shimizu residents and PCAA and the government office staff were generally satisfied with the project. Project farmers are planning to remain in the village and to expand their farms. The PCAA and the government offices have no plans to expand the Shimizu project. Stores and cafeterias were not satisfied with variety and volume of vegetables supplied. They are willing to purchase locally grown vegetables and other crops.

The findings indicated that relocation of villagers to a new locale was a needed procedure. An unfilled market for vegetables exists in Koror and Shimizu hamlet needs more population for expansion of vegetable production.

Recommendations suggested are improved farming practices, expanded extension services and the need for social/cultural enrichment in the hamlet.

Future study should be aimed at an expansion agricultural methods, utilization of locally available resources, and determination of the factors which limit the expansion of the agriculture in Palau.

LICHTENSTEIN, STEPHEN. An Assessment of Mainstreaming in Vocational Agriculture Programs in New York State. Thesis, M.S., 1979, Cornell University. 203 p. Mann Library, Cornell University, Ithaca, NY 14853.

Purpose. To assess the extent and nature of mainstreaming handicapped students in vocational agriculture classes at Central Schools and BOCES centers in New York State as a basis for recommendations for mainstreamed programs.

Method. Teachers of agriculture in New York State were sent two surveys. Survey I was designed to determine the extent to which different types of handicapped students are mainstreamed. Survey II was designed to assess educational practices, preservice and inservice needs of teachers with mainstreamed programs. Two hundred and eighty-two teachers provided data for Survey I, one hundred and five responded to Survey II, and five on-site interviews were conducted for this study.

Findings. The data from the two surveys revealed that approximately 70% of the BOCES and central school programs in vocational agriculture had mainstreamed classrooms. The most common types of handicapping conditions were (from most prevalent to least); mentally retarded, emotionally disturbed, learning disabled, multiple handicaps, hard of hearing/deaf, physically handicapped, visually and speech impaired.

In the second survey, teachers responded to a variety of need/problem statements pertaining to the practice of mainstreaming and gave some insight into course topics for preservice and inservice education. Prominent concerns felt by teachers with mainstreamed students included: work placement programs, availability and use of individual education programs, coordination of personnel and services for handicapped students, adapting performance objectives, grading and evaluation plus others. Teacher education topics were gleaned from the list of concerns and problems stated.

On-site interviews with teachers were conducted at five different locations in New York State to assess program practices in the field.

WOOD, JEFFREY ALAN. A Study of the Cooperative Relationships Between Teachers of Vocational Agriculture and Cooperative Extension Agents in Planning and Conducting Programs of Instruction in New York. Thesis, M.S., 1979. Cornell University. 152 p. Library, Ithaca, NY 14853.

Purpose. The purposes of this study were to: (1) investigate the perceptions held by teachers of vocational agriculture and extension agents about the processes of interagency cooperation with regard to planning and conducting agricultural education programs in New York State; (2) investigate the relationship of selected demographic characteristics and the perceptions held by vocational agriculture teachers and extension agents with regard to cooperative activities; (3) determine if significant differences in perceptions of cooperation exist between BOCES and central school vocational agriculture teachers; and (4) synthesize a set of recommendations for increased interagency cooperative efforts between Cooperative Extensionand Vocational Agriculture.

Method. A random sampling of thirty counties in the state was drawn. Within the thirty counties, two vocational agriculture teachers were randomly chosen to participate and the county extension program leader in agriculture was requested to respond. Data for the study were obtained from a mailed questionnaire. Responses were received from all county agents and from 51 of the 60 teachers of vocational agriculture. The quesionnaire contained a list of forty-four activities and factors relating to cooperative relationships between Vocational Agriculture and Cooperative Extension.

Findings. Extension agents' and agriculture teachers' perceptions of activities and factors that effect interagency cooperation were found to differ significantly. Disagreement occurred on 18 percent of the forty-four activities and factors included in the questionnaire.

With respect to the selected demographic characteristics and their interaction with regard to agents' and teachers' perceptions of cooperation, background characteristics (age and college degree achieved) seemed to have no influence on one's perceptions of cooperation, while environmental characteristics did. School type, county population, years in present position, and experience each significantly contribute in molding one's perceptions of interagency cooperation.

Recommendations were formulated from the findings, all of which encourage and support interagency cooperative relationships between Cooperative Extension and Vocational Agriculture.

NORTH CAROLINA

CLARY, J. R., Mayo, S. C., Miller, T. R., Bryant, C. D., N. C. State University and Ball, A. P., The A & T State University. "Status of Vocational Agriculture and the Changing Roles of Teachers of Vocational Agriculture in North Carolina." Staff Study, 1976-78, In cooperation with Occupational Research Unit, N. C. Department of Public Instruction. Raleigh, North Carolina.

Purpose. To examine the changing roles of teachers of vocational agriculture, and to evaluate the current status of programs as a basis for projecting the future role of the teachers.

Method. A structured interview of teachers and their principals in a random sample of schools. The sample was stratified by the three major geographical areas of the state. Interviews were selected from eight universities across the state, provided special training sessions, and hired to do the actual interviewing. The project staff arranged by telephone for the interview visitations. Of 124 potential interviews, 122 were completed.

Findings. The length of "at school" time for a Vo-Ag teacher is rapidly approaching that of all other teachers. A large number of teachers will need to enter or return to teaching within the next ten years to maintain the present number of teachers. Class size is increasing dramatically; females and students from urban areas account for a major portion of the increase. Supervised occupational experience and adult education programs are weak and the F.F.A. is average. Teacher morale is becoming lower; prestige of teacher remains steady. Teachers are being hampered by lack of time, deemphasis being given to the program, and types of students enrolling in programs. The teacher of agriculture is no longer communicating in an original fashion with the community in either the role of interpreter of agricultural education or of changes in agriculture.

JEWELL, Larry A. "Opinions of School Administrators Concerning Vocational Agriculture Programs in North Carolina." Staff Study, 1978-79, North Carolina State University, Raleigh.

Purpose. The purpose of this study was to bring together the opinions of North Carolina school administrators concerning several factors of the vocational agriculture program in North Carolina and to see if sufficient agreement existed that would warrant reconsideration of the organizational structure of the program and teacher preparation in vocational agriculture education. Responses of administrators were compared to determine if administrative position was a factor in the acceptance of vocational agriculture.

Method. The population for the study consisted of all North Carolina public secondary school superintendents and vocational education directors and principals of public secondary schools with vocational agriculture as a part of their curriculum. The study sample consisted of 50 school superintendents, fifty vocational directors and 100 high school principals. This study sample was in excess of 33 percent of the population for each type of administrators.

An instrument consisting of 45 questions was selected for collecting the research data. This instrument was a slightly modified version of an instrument originally designed and used by Dr. Earl Webb in 1959 with a study he completed in Missouri entitled, "Opinions of School Administrators Concerning Selected Aspects of the Program of Vocational Agriculture in Missouri." The instrument has since been used with two other studies, one in 1976 by Dr. Glen Shinn with a study in Missouri and the other in 1977 by Dr. Marian Kimmons with a study in South Dakota. The studies by Drs. Shinn and Kimmons, as well as the current study, are basically replications of the study conducted by Dr. Webb.

The instrument was a mail-out confidential questionnaire consisting of a forty-five (45) item survey with single and/or multiple responses. The instrument was mailed with a cover letter and a self-addressed envelope. Non-respondents were sent a follow-up letter three weeks after the initial mailing. A second follow-up letter went to the individuals who had not responded to either of the first two mailings three weeks after the first follow-up letter. Eighty (80) percent of the instruments were returned representing a seventy-seven (77) percent return for the high school principals, an eighty-two (82) percent return for vocational directors and an eighty-four (84) percent return for the superintendents. These data were analyzed using the Chi Square for independent samples.

Findings. To the extent that the facts obtained and the opinions expressed are accurate, and in so far as respondents are representative of the whole, the following conclusions may be drawn as of the time this study was made:

It is apparent that training in vocational agriculture is believed to be vocational education. The administrators indicated that vocational agriculture should have responsibilities for training students who enter agriculturally related occupations. It also seems apparent that the administrators feel that students enroll in vocational agriculture because they are interested in occupational training for jobs related to agriculture.

A majority of administrators were favorable toward the use of advisory committees.

The administrators agreed that taking four years of vocational agriculture allowed the student to receive a good general education. They also indicated that they felt the students were being prepared to go immediately into farming or agricultural related occupations after graduation from high school. However, the majority of the administrators indicated that job placement should not be used as the measure of program accountability.

It seems apparent that the administrators are slightly concerned about the cooperation vocational agriculture teachers have with other faculty members and they also feel more emphasis should be given to professional improvement by the vo. ag. teachers. The majority of the administrators indicated that qualifications of teachers of vocational agriculture in the area of housekeeping were inadequate.

The work load of teachers is determined by the number of classes taught and other intra and extra-curricular duties. The administrators feel that the workload of the agriculture teachers are either equal to or less than those of other teachers.

The administrators also indicated that the vocational agriculture teachers should be paid the same level as other teachers with comparable training and experience. They also indicated that the vo. ag. teachers should be reimbursed for all personal expenses involved in completing the duties of their job.

NORTH DAKOTA

AMENUVOR, Bess K. "Selected Roles of the Extension Field Worker as Perceived by North Dakota Cooperative Extension Service Administrative and Field Staff Members." Master of Science Colloquium Paper, 1978, North Dakota State University, Fargo.

Purpose. The purpose of this study was to determine the perceived importance of selected roles and role statements by the North Dakota Cooperative Extension field staff and by the state administrative staff. Specific objectives of the study were: 1) to determine the relative importance of the selected roles of the Cooperative Extension Service field staff member as perceived by both the field and administrative staffs, 2) to compare the perceptions of field staff members to those of the state administrative staff for the selected roles, and 3) to compare the perceptions of the selected roles of the Extension Service field staff by Home Economics field staff to those by the Agricultural field staff.

Method. A questionnaire containing eight selected roles and thirty-two role statements was developed. These were identified from the North Dakota Cooperative Extension Service Job Description Manual, interviews with some field staff members of the Minnesota Cooperative Extension Service and consultation with an advisory group.

The instrument was administered by mail. Ninety-nine of the 104 questionnaires (96.2%) were returned. Data from these were tabulated and analysis of variance was used to analyze the differences in perceptions between groups.

Findings. Major findings were: 1) Members of the North Dakota Cooperative Extension Service administrative and field staffs perceived Program Administration as the most important of the eight selected roles of the field worker. Public Relations was rated as the second most important role. The Teaching role was rated third, Consultation fourth, Communication Link fifth, and the Student role sixth with the roles of Office Management and Civic Leadership considered the least important, 2) There were no significant differences when the role perceptions of the administrators were compared to those of the field workers. However, there were significant differences between the two groups' perceptions of six of the thirty-two statements that were used to define the selected roles, and 3) the Agricultural and Home Economics field staffs showed differences in their perceptions of three roles.

BRAHEE, Douglas R. "Estimating and Projecting North Dakota Agricultural Manpower Needs in Selected Agribusinesses from Selected Existing Data Sources." Master of Sciece Colloquium Paper, 1978, North Dakota State University, Fargo.

Purpose. The purposes of this study were: 1) To determine North Dakota manpower needs in selected agribusiness industries from the National Manpower Study of 1970 and from County Business Patterns for 1968-1973, 2) To develop a method for determining relationships between agribusiness employment data in the National Manpower Study and in County Business Patterns which could be used to establish and update agricultural business manpower needs data from subsequent County Business Patterns publications, and 3) To estimate agribusiness manpower needs in North Dakota for 1980 in selected agribusiness industries utilizing the National Manpower Study and the County Business Patterns data for 1968-1973.

Method. The procedure used was to take a base year, in this case, 1970 and determine a percentage of employees employed during that year needing agri-business competencies (from the National Manpower Study) within each of the selected industries. Using total employment data for each of these agricultural industries from the County Business Patterns 1968-1973, linear regressions (least squares formula) were calculated to project to the year 1980 the total employment within a selected industry.

The total projected employment figure for 1980 was then multiplied by the percentage figure calculated from the National Manpower Study. This resulted in a projected number of employees needing agricultural competencies within each selected agricultural industry in 1980.

Findings. Several conclusions may be drawn from this study. First, there were many areas of agribusiness with rapidly expanded job opportunities. The relationship that exists between the National Manpower Study and the County Business Patterns is compatible and manpower needs can be projected and updated with the data included in these two documents. It is also possible to obtain estimates of manpower needs within the selected agribusinesses by utilizing the data from County Business Patterns and the National Manpower Study.

FARD-SARHANGI, Ezatollah. "Foreign Graduate Students' Reasons for Choosing the United States and North Dakota State University College of Agriculture for Their Study." Master of Science Colloquium Paper, 1978, North Dakota State University, Fargo.

Purpose. The purposes of this study were: (1) to determine the national origin, educational level, field of specialization and place of settlement of foreign graduate students after completing studies at North Dakota State University College of Agriculture and (2) to determine the relative influence of certain selected persons and reasons upon the decisions of the foreign graduate student to choose the United States and North Dakota State University College of Agriculture for their graduate studies.

Method. A questionnaire was used to collect data from fifty-one foreign graduate students who were enrolled in the College of Agriculture at North Dakota State University in the spring of 1978. The questionnaires were given to the foreign students so that they could read as well as hear the questions. The personal contact with the student was made in order to explain some parts of the questionnaire.

Findings. Major findings of this study were as follows: (1) the overwhelming majority of the foreign graduate students had completed their undergraduate studies in their home countries and planned to return to their home countries following completion of graduate studies, (2) educational programs and facilities in the United States have a very positive image which was the major factor influencing decisions of the foreign graduate students to study in this country; (3) the prestige of obtaining a graduate degree from an American institution had some influence on the decisions of foreign students to study in the United States and (4) the graduate programs in the College of Agriculture at North Dakota State University enjoy a very good reputation in their respective fields. This reputation was of major influence upon the enrollment decisions of foreign graduate students.

METZGER, Stephen S. "Agricultural Education Magazine Readership Profile." Master of Science Colloquium Paper, 1977, North Dakota State University, Fargo.

Purpose. The purpose of this study was to secure information from subscribers of the Agricultural Education Magazine that would aid in evaluating the magazine and also in developing a profile of the subscribers of the magazine.

Method. A mail questionnaire was sent to 300 randomly selected subscribers of the Agricultural Education Magazine. The questionnaire followed by a reminder card and another questionnaire for nonrespondents was designed to gather information concerning the subscribers age, educational level completed, years of work in agricultural education, and present working position. Information concerning usefulness of various articles, reading frequency, picture quality and number, and informative value of the magazine was also gathered from the completed questionnaires.

Findings. The study revealed that a large majority (87.3%) of subscribers to the Agricultural Education Magazine were secondary vocational agriculture instructors with the major portion between the ages of 25 and 44. The study also indicated that more than one-half of the subscribers held a minimum of a Masters Degree. Thirty percent of the respondents indicated that the most useful articles were those dealing with such items as teaching methods, teachers' experiences, new trends and developments and facilities and equipment. Articles read most frequently were stories in pictures and key articles related to each magazine's theme. More than three-fourths of the respondents indicated they read some articles in each issue while fewer than five percent indicated they seldom read any articles. More than eighty-eight percent of the respondents rated the information value of the magazine as either good or excellent.

OLSON, Jay M. "Reasons Why North Dakota Secondary Vocational Agriculture Instructors With Three or More Years of Teaching Experience Have Remained in Teaching." Master of Science Colloquium Paper, 1979, North Dakota State University, Fargo.

Purpose. The purpose of this study was to determine the level of influence a selected list of factors might have on the decision of current high school teachers of Vocational Agriculture to remain in teaching and compare the relative influence of these factors among tenure groups.

Method. A mail questionnaire was sent to all 55 secondary Vocational Agriculture teachers in North Dakota who had completed at least three years of teaching experience and who were continuing to teach during the 1978-1979 school year. Teachers were asked to rate each of 28 selected factors on a 5 to 1 scale indicating the level of influence these factors may have had on their decision to remain in teaching. For comparison purposes, teachers were grouped by length of tenure.

Findings. Major findings of this study were: (1) North Dakota Vocational Agriculture teachers who had remained in secondary teaching for more than three years were generally dedicated teachers that derive satisfaction from serving others, observing growth and development of students, working in agriculture, and being innovative and varying the work being done; (2) factors affecting teaching conditions have an important influence upon decisions to remain in teaching although they were not rated as highly as factors concerned with serving others and job satisfaction; (3) efforts to improve teaching conditions for these teachers could further increase job satisfaction and likely lead to increased tenure.

OHIO

DICKENS, John William. "Why Vocational Agriculture Teachers Enter and Remain in the Teaching Profession." Doctor of Philosophy Dissertation, 1978, The Ohio State University, Columbus.

Purpose. This research sought answers to why persons enter and remain in the agricultural teaching profession.

Method. A descriptive survey design using two mail questionnaires was followed. One hundred and ten entering teachers responded to the two mailings and twelve additional randomly selected nonrespondents were interviewed by telephone. Seventeen of the 31 persons who had left teaching responded to the two mailings. One hundred and fifty-four teachers remaining in the profession responded to the two mailings.

Findings. Entering teachers were asked to rate the influence of 85 factors upon their decision to enter teaching. A scale of 5 = strong influence, 4 = some influence, 3 = uncertain, 2 = low influence, 1 = no influence, and 0 - not applicable was used. The following factors were rated by the teachers as having "some" influence in their decision to enter teaching:

(1) I thought I would enjoy the variety of subject matter to be taught, (2) I thought I would enjoy teaching high school students; (3) I felt I would have a feeling of accomplishment and success from teaching; (4) I felt I would enjoy working with the technical aspects of my instructional area; (5) I felt I could develop my own program as a teacher; (6) I thought I would find each day different in my role as a teacher; (7) I felt that teaching would provide opportunities for professional development; (8) I felt that I would have the chance to stay current in my field; (9) I thought I would enjoy the flexibility of summer employment; and (10) I thought I would enjoy working with other adults in agriculture.

Teachers who remain in the profession rated the following factors as having "some" influence in their decision to remain in teaching:

(1) I have an adequate retirement plan from teaching; (2) I enjoy the variety of subject matter to be taught; (3) I have a feeling of accomplishment and success from teaching; (4) I enjoy teaching high school students; (5) I enjoy working with the technical aspects of my instructional area; (6) I can develop my own program as a teacher; (7) I find each day different in my role as a teacher; (8) Students that I teach; (9) I can associate with others working in agriculture; (10) I enjoy working with other adults in agriculture; (11) I can associate with farm people; (12) I enjoy a rural life situation where I teach; and (13) I have security in my job.

KARAMI, Ezatollah. "An Appraisal of the Extension Service in Iran as Perceived By Extension Specialists and Extension Agents." Doctor of Philosophy Dissertation, 1979. The Ohio State University, Columbus.

Purpose. The general problem addressed in this study was: How do Extension specialists and Extension agents appraise the educational efforts of the Extension Service in the area of agricultural production and village youth clubs in terms of the accomplishment of objectives of Extension Service in Fars and Semnan provinces of Iran?

Method. The target population of this study consisted of 21 Extension specialists and 48 Extension agents.

Findings. The major conclusions of this study were: (1) Extension agents and specialists in Fars and Semnan provinces perceived home and business visits, demonstrations, and short period courses as the most effective Extension educational techniques. (2) Extension agents and Extension specialists felt that the overall effectiveness of Extension Service was very low. (3) Agricultural educational objectives were appraised by specialists as being less effectively attained by agents. (4) Extension specialists were less satisfied with the performance of critical tasks by the Extension Service in agricultural education than agents. (5) The respondents felt the Extension Service was not successful in its educational efforts for the following reasons: (a) The Extension Service does not have enough resources, facilities, and funds to do a good job. (b) The Extension programs are not based on the needs of people and local situations. (c) The Extension Service has deviated from its objectives (increasing farmers' income through educational programs). (d) Research institutions have not provided the agent with information which can be used to meet the needs of farmers. (6) The village youth club educational objectives were felt to be less effectively attained by specialists than by agents. (7) Specialists and agents perceived the overall effectiveness of village youth club educational efforts as very low. (8) The reason for low effectiveness of village youth club programs were as follows: (a) Lack of resources, facilities and funds. (b) Village youth club programs have never been implemented from planning to action. (c) Village youth club programs do not meet the needs of rural youth.

LINDSEY, Sarah Jane. "Supervised Occupational Experiences in Production Agriculture for Students with Limited Opportunity." Master of Science Thesis. 1978, The Ohio State University, Columbus.

Purpose. The purpose of this study was to determine how selected teachers of production agriculture plan, conduct, and evaluate six types of occupational experiences for limited opportunity students. The six supervised occupational experience programs analyzed in this study were: farm placement, school farm/land lab, cooperative, livestock chain, gardening, and small animals.

Method. Twelve different vocational agriculture departments, located in ten Agricultural Education Districts of Ohio, participated in this study of SOE for limited opportunity students. Teacher Educator faculty members in the Department of Agricultural Education at The Ohio State University and the State Supervisors of Agricultural Education selected vocational agricultural departments for the study based on the departments quality SOE programs for limited opportunity students.

Findings. The following conclusions were made, based upon the information obtained from interviews with teachers and students' questionnaires: (1) Vocational agriculture teachers recognized an increasing percentage of limited opportunity students enrolling in their production agriculture departments. (2) Many of the limited opportunity students in the study lived on farms and were not limited by the factor of land. (3) Teachers perceived themselves as the person most involved in the choosing of limited opportunity students for a particular SOE, deciding the students' initial projects, and evaluating the students' performance therein. (4) Both teachers and students recognized the importance of written agreements for each student's SOE. (5) A high majority of the students made the management decisions for their occupational experience projects. (6) Teachers saw themselves as influencing students to complete their occupational experience program plans, with "much" emphasis placed upon recordkeeping. (7) Limited opportunity students generally recognized the importance of keeping records on their SOE, but were less active in setting production goals, designating skills, and learning more difficult skills each year. (8) Planning, conducting, and evaluating a quality SOE program for limited opportunity students required a great deal of time and devotion on behalf of teachers and students. (9) A majority of the teachers believed the agricultural experience gained through an SOE was of more value to limited opportunity students than the profit earned. (10) All SOE options for limited opportunity students in production agriculture have advantages and disadvantages which must be recognized during the planning, conducting, and evaluating stages. (11) A majority of the limited opportunity students participating in the SOE's of the study were anticipating a career in agriculture. (12) Teachers perceived correctly the desire of students with limited opportunity to enter farming, yet questioned the feasibility of the career choice when considering the current difficulty in entering farming.

McCRACKEN, J. David and REIS, Ann. E. "An Instrument to Measure Disruptive Behavior in Vocational Agriculture Classrooms." Staff Study. 1979, The Ohio State University, Columbus.

__Purpose__. The major purpose of this study was to develop an instrument to measure disruptive behavior in lecture-discussions settings in secondary vocational agriculture classrooms. Objectives were: (1) To construct an instrument which would reliably categorize and quantify disruptive behavior when used by properly instructed observers. (2) To gather data concerning disruptive behavior problems in vocational agriculture classes.

__Method__. Data were initially gathered from vocational agriculture teachers enrolled in a graduate level agricultural education course at The Ohio State University during Summer quarter 1978. They were asked to describe as many different types of disruptive behavior problems as they could. Twelve specific categories of behavior were detailed under headings of Verbalizations, Distractive, Unproductive, and Aggressive. An instrument was developed and revised after review. Eight teacher educators who regularly observe vocational agriculture instructors were selected to field test the instrument. The observers were trained on the use of the instrument in a brief session. The recommended procedure was to sample five minutes of each fifteen minute time period. Data gathered included type of disruption, severity of disruption, number of students involved, type of teacher, and time block. Fifty separate classroom observations with 195 five minute time intervals were collected.

__Findings__. A reliability estimate of .74 for severity of disruption ratings was obtained. The reliability estimate for number of occurences was quite low at .55. Based on the findings, changes were recommended in the instrument. The raters generally concluded that the instrument was easy to use and that there were no problems in following the given directions. The conclusion was that the instrument was worthwhile for observing and counseling teachers, whether or not the data was needed for research purposes.

MILLER, Larry E. and GREEN, Joe W. Jr. "Occupational Experience Requirements for Vocational Agriculture Teachers." Staff Study, 1979, The Ohio State University, Columbus.

__Purpose__. The purpose of this study was to analyze the occupational experience requirements to become a teacher of vocational agriculture by states.

__Method__. Data were gathered by identifying selected teacher educators in each state, mailing a letter soliciting their input regarding their requirements, sending a follow-up letter to non-respondents, and analyzing and describing the responses.

__Findings__. Replies were received from 38 states. An analysis of these revealed a wide diversity of occupational experience requirements to be certified as a teacher of vocational agriculture. Ten states reported that no occupational experience was required, four simply recommended some, seven required one year, nine required two years, three required three years, and five had multilevel requirements. Numerous states would substitute occupational experience directed by the Department of Agricultural Education in lieu of employment or self-employment experience.

Variability in occupational experience was further noted in the states when the years of formal education were considered. In general, occupational experience requirements rose as the years of formal education declined. The verification of occupational experience is done by the teacher training institution in all but a few cases.

The study concludes with the call for greater conformity among the states in the occupational experience requirements. This conclusion has implications for improved reciprocity of certificates and the movement of teachers from areas of surplus to areas of teacher shortages. An example of an instrument to gather occupational experience information and a sample requirement description are provided in the paper.

MOKMA, Arnold L. "An Evaluation of the Agricultural Production Program of the Institute of Agricultural Technology at Michigan State University." Staff Study, 1978, The Ohio State University, Columbus.

Purpose. This study was conducted to determine the strengths and weaknesses of the current program and to develop recommendations for future program modifications.

Method. (1) A series of departmental meetings was held to conduct an indepth, "zero based" program review. (2) A student questionnaire was prepared and administered to all graduates of 1977 and 1978. There were 62 responses. (3) A farmer/employer questionnaire was mailed to 500 persons to assess (a) Their awareness of the Agricultural Production program, (b) Their needs for employees and (3) Their suggestions for program revisions based on skills desired of employees. Slightly more than 100 responded.

Findings. Some of the major findings are: The departments took "ownership" for their Ag Tech courses. Several revisions were made in existing courses and many new courses developed to make the curriculum more relevant to technical needs. Advisors were identified by each department to advise program majors (Dairy, Livestock, Crop, Fruit and Vegetable). Students attend Ag Tech "to improve my knowledge and skills." Less than 50 percent of the students graduate "on schedule" (18 months after initial entry). Several students enroll in Ag Tech with the intention of staying one term or one year. A majority of students (1) felt the program "adequately prepared them for entry into farming"; (2) were satisfied with the course organization but preferred more laboratory sessions; (3) rated placement training as a "good learning experience"; (4) would like opportunities for waiver exams; (5) would like to elect more advanced courses; and (6) would prefer an Associate Degree rather than the current certificate.

MOKMA, Arnold L. The Faculty Development Needs of the Agricultural Technical Institute, The Ohio State University." Staff Study, 1978, The Ohio State University, Columbus.

Purpose. This study was conducted to determine the needs of the faculty in order to provide the appropriate support and resources for faculty improvement and development.

Method. A needs assessment questionnaire was developed by a faculty committee. The committee members made personal contacts with all faculty members to insure a complete (33) response.

A follow-up questionnaire to identify workshop/seminar content in three areas - Teaching Strategies, Designing Instruction, and Personal Improvement - was administered to the faculty with 33 responses.

Findings. The needs assessment survey identified the following outcomes as high priority - desired immediately: Increased ability to use appropriate, varying teaching strategies. Increased knowledge about ATI's operational procedures, personnel policies, facilities, etc. Increased ability to use human relations skills in order to communicate more effectively in your role. Increased confidence in yourself as a staff member.

The workshop/seminar survey identified the following as high priority topics: Individualizing Instruction (Mastery learning) - Time Management - Counseling Techniques (personal counseling) - and Counseling Techniques (academic advising).

MOHAMED, Mohamed Hago. "Relationships Between Demographic Characteristics and the Importance and Frequency of Task Performance in Six Occupational Areas in Agricultural Production." Doctor of Philosophy Dissertation, 1978, The Ohio State University, Columbus.

Purpose. The principal purpose of this study was to determine which characteristics possessed by the farmers in six occupational areas of agricultural production showed significant relationships to the degree of importance of the tasks performed. A second purpose of this study was to determine which duty areas within animal and crop production showed significant relationships with the frequency of the duty area performance and the demographic characteristics possessed by the farmers.

Method. The specific objectives of the study were accomplished by utilizing the data gathered in the project, "Determination of Common Core of Basic Skills for Agribusiness and Natural Resources."

Findings. For the dairy farmers, the swine farmers, the beef farmers, the grain farmers and the forage farmers, the findings of this study revealed that there were moderate-high correlation relationships between the amount of work experience and the importance of the task. The findings for the vegetable farmers revealed there were high correlation relationships between the amount of work experience and the importance of the task. There were slight-moderate correlation relationships between the "source of training" and the importance of the task as indicated by the six types of farmers. Some of those relationships were significant at the .05 level. For the vegetable farmers, the correlation coefficient to measure the relationship between the variable "college/university program," as a source of training, could not be computed because all respondents did not receive training in college/university programs.

MORTON, Raymond H. "The Relationship Between the Quality of Supervised Occupational Experience Programs and Achievement of Students in Vocational Agriculture." Doctor of Philosophy Dissertation, 1978, The Ohio State University, Columbus.

Purpose. The primary purpose of the study was to investigate the relationship between the quality of supervised occupational experience (SOE) programs as measured by income, scope, and growth, and the level of achievement on a multiple-choice test designed to measure technical knowledge in production agriculture for students enrolled in production agriculture. Other independent variables included the opportunity to engage in supervised occupational experience, cumulative grade point average, the number of years completed in vocational agriculture, and the number of instructor projects received by the student in 12 months' time.

Method. The target population of the study was high school vocational agriculture students enrolled in production agriculture in central Ohio. Data were collected from 206 students in ten randomly selected schools with production agriculture programs.

Findings. There was a positive relationship between achievement test scores and: (1) quality scores of supervised occupational experience programs ($p < .01$); (2) opportunity to engage in supervised occupational experience programs, as measured by an opportunity index ($p < .001$); (3) cumulative grade point average ($p < .001$); (4) the number of years completed in vocational agriculture ($p < .001$); and, (5) the number of project visits received by students from their instructor in 12 months' time ($p < .01$).

Using step-wise multiple regression analysis, each independent variable was entered in single steps to the multiple regression equation. Of the total proportion of explained variation in achievement (.3816): (1) 71 percent of the variance could be explained by cumulative grade point average (.2708/.3816); (2) An additional 14 percent of the variance could be explained by number of years completed in vocational agriculture (.0519/.3816);

(3) An additional 10 percent of the variance could be explained by opportunity to engage in supervised occupational experience programs (.0386/.3816); (4) An additional 4 percent of the variance could be explained by quality of supervised occupational experience programs (.0145/.3816); and, (5) An additional 1 percent of the variance could be explained by the number of project visits received by students from their instructor (.0058/.3816).

An F statistic was computed to test for significance. Achievement was significantly related to opportunity to engage in supervised occupational experience, cumulative grade point average, and number of completed years in vocational agriculture at the .01 level; quality of supervised occupational experience programs was significant at the .05 level; but, the number of project visits received by students from their instructors in one year was not statistically significant.

NEWCOMB, L.H. "Agricultural Education: Review and Synthesis of the Research." Staff Study, 1978, Eric Clearinghouse in Adult, Career, and Vocational Education, The National Center for Research in Vocational Education, Columbus.

Purpose. The purpose of this study was to review and synthesize the research in agricultural education conducted between 1969 and 1978.

Method. A comprehensive search of the literature was conducted and the most significant and/or representative studies were reviewed in order to summarize the current status of the findings of research in agricultural education. The research was divided into twelve categories and for each category major findings were delineated, followed by summary comments to indicate trends, patterns, and important findings in each area.

Findings. Detailed findings were reported for each of the twelve categories. In addition the following are some of the conclusions that were developed: (1) even though the profession has an abundance of task analysis information and nationally prepared curriculum guides available for all specialty areas, little attempt has been made to evaluate task lists or curriculum guides using actual field observations; (2) even though there appears to be sufficient work completed in identifying the professional competencies needed by vocational agriculture teachers, the profession could benefit from coordinated inquiry into which competencies improve student learning; (3) even though there is substantial documentation of the shortage of vocational agriculture teachers, to date there is no evidence of a recruitment program successful enough to attract the attention of the profession; (4) agricultural education continues to lack the kind of programmatic research necessary for in-depth understanding essential to an emerging discipline; (5) the research is too weak in the area of building on an adequate conceptual framework and (6) most studies are isolated with only a few areas showing cummulative findings.

PAPRITAN, James Carl. "The Effect of Pocket Calculators Versus Paper and Pencil Procedures on Algorithm Achievement of Vocational Agriculture Students." Doctor of Philosophy Dissertation, 1978, The Ohio State University, Columbus.

Purpose. The purpose of the study was to determine whether the method of computation, during a unit of instruction and the respective posttest, improved the mathematical performance of sophomore students enrolled in vocational agriculture classes in Ohio secondary schools. The study evaluated the method of computation (pocket calculators versus paper and pencil procedures) in relation to the following dependent variables: (1) performance on a cognitive posttest measuring agriculture algorithm achievement, (2) attitude toward agriculture mathematical computations and algorithm achievement, and (3) time spent on the posttest agricultural mathematical computations and algorithm achievement. The independent variable manipulated in the study was the method of computation in an introductory machinery management unit of instruction. The active and fixed independent variable was neither crossed nor nested. There were two levels of the independent variable: (1) computations utilizing pocket calculators, and (2) computations utilizing paper and pencil procedures. The experimental design used in the study was the posttest-only control group design.

Method. The researcher selected sophomore vocational agriculture students as the target population for the study because the sophomore class was normally the highest grade level that was intact in the vocational agriculture curricula throughout Ohio, since many junior and senior students moved to the joint vocational school after their sophomore year. The use of all sophomore classes was unrealistic in terms of the resources (the logistics and security involved with pocket calculators and other multi-media materials) available to the researcher. The experimentally accessible population (twenty schools with sophomore classes in vocational agriculture) was randomly selected from a frame of 62 secondary schools within a 50 mile radius of Columbus, Ohio. These twenty schools were randomly assigned into two groups. The treatment levels (students using pocket calculators versus students using paper and pencil procedures) were then randomly assigned to one of these two treatment groups. The group using the pocket calculator was the experimental group (n = 10 schools) and the group using the paper and pencil procedure was the control group (n = 10 schools). During the Autumn of 1977, each treatment period was one week in duration with an experimental group and control group working simultaneously.

The data for the study initially consisted of measures on students in each school in both groups. The data were averaged by school to obtain mean measures for both treatment groups. The statistical procedure used to analyze the mean data for each treatment at the .05 level of significance was the multivariate analysis of covariance.

Findings. The findings indicated significant differences in cognitive achievement and time utilization when pocket calculators were employed to make mathematical computations and master algorithms rather than paper and pencil procedures. There was no difference found between either group with respect to attitude. These findings indicated that the pocket calculators could and do positively influence the vocational agriculture student's mathematical computations and algorithm achievements.

SABIHI, Masood. "Perceived Professional Education Training Needs of the Extension Specialists and Agents in Selected Provinces of Iran." Doctor of Philosophy Dissertation, 1976, The Ohio State University, Columbus.

Purpose. The major purpose of this study was to identify and describe the perceived professional education training needs of the Extension specialists and agents in selected Provinces of Iran. Training needs were described based on the role expectation of the respondents as they related to the areas of: Extension philosophy; organization and administration; program planning; teaching-learning process; evaluation; human development and social knowledge.

Method. The target population of the study included 128 Extension specialists and agents currently employed by the Extension Service. The data for this study were collected by the personal interview method and a mail questionnaire.

Findings. The following were the conclusions from this study: (1) Overall, the Extension agents expressed a need for more professional education in all training areas than did the Extension specialists. (2) Generally, the Extension specialists and agents expressed some need for professional education in performing the items involved in six areas of training in this study. (3) Among the six professional education training areas studied in this research, "program planning" was the area perceived by the extension specialists as the one in which they needed the greatest amount of training. (4) Among the six professional education training areas studied in this research, "Extension philosophy, organization and administration" was the area perceived by the Extension agents as the one in which they needed the greatest amount of training. (5) Both specialists' and agents' perceptions of the amount of professional education training needed in the areas of "Extension Philosophy, Organization and Administration" and "Evaluation" decreased as the level of formal education increased. (6) The Extension specialists' perceptions of the amount of professional education training needed in the area of "Extension Philosophy, Organization and Administration" decreased as age increased. (7) The Extension specialists' perceptions of the amount of professional education training needed in the area of "Extension Philosophy, Organization and Administration" decreased as the length of tenure increased. (8) The Extension agents' perceptions of the amount of professional education training needed in the areas of "Extension Philosophy, Organization and Administration" and "Evaluation" decreased as the level of formal education increased. (9) There were significant differences between respondents (specialists and agents) who had less than one year of tenure and those who had five to ten years of tenure; between those respondents who had five to ten years of tenure and those who had more than ten years of tenure in the amount of professional education training perceived as needed in the area of "Program Planning."

SHANNON, Theodore Paul. "Certification and Teacher Education for Vocational Teachers Employed in State Correctional Institutions." Doctor of Philosophy Dissertation, 1978, The Ohio State University, Columbus.

Purpose. This study was precipitated by the increasing recognition that vocational education can be a very important component in the rehabilitation of incarcerated persons. The purpose of this descriptive national study was to collect and present data which reflected the nature of contemporary employment prerequisites, certification requirements, and teacher education programs for vocational teachers employed in state-operated correctional institutions.

Method. The chief educational administrators of the state correctional system in each of the fifty states and the District of Columbia comprised the survey population. Insofar as two separate correctional systems for juveniles and adults were operated in some states while other states maintained a single, comprehensive correctional system, a total of seventy-nine chief educational administrators were contacted via the mail survey method. Completed questionnaires were returned by seventy administrators for a response rate of eighty-nine percent.

The employment of vocational teachers to instruct vocational classes inside the institutions was the most prevalent means of offering vocational education in state correctional systems. Generally, correctional vocational teachers were not required to hold the baccalaureate degree although they had to meet other types of employment prerequisites in varying combinations. Most new vocational teachers had to show evidence of gainful work experience in the trade or occupational area to be taught. In relatively few instances were new vocational teachers required to pass occupational competency examinations.

Findings. Twenty-four colleges around the country were identified as offering some type of in-service teacher education programs designed especially for correctional vocational teachers. Only eight colleges were identified as offering any type of specialized pre-service teacher education programs for correctional vocational teachers.

STARLING, John T. "Farm Business Analysis Report of Programs Conducted by Teachers of Vocational Agriculture." Staff Study, 1978, The Ohio State University, Columbus.

Purpose. The purpose of this study was to provide farm business analysis teachers as well as teachers of agricultural production courses with some averages, relative to certain efficiency factors, which they can use in teaching classes in agricultural production to make them more realistic.

Method. Ohio teachers who were conducting Farm Business Planning and Analysis programs submitted 436 farm business summaries for computer analysis. Averages of several selected measures of performance from the farm business analyses were used to secure the data for this study.

Findings. Some of the major findings of this study were: (1) The average capital investment per farm was $253,017.00 an increase of $14,524.00 per farm over 1977. (2) The investment in machinery and equipment increased over $16,000 per farm over 1977. (3) The average gross income per farm was $103,572.00, an increase of $18,057 from 1977. (4) The average net farm income was $29,391.00 or an increase of $11,006.00 compared to 1977. (5) The picture was brighter for both beef feeding and cow-calf operations as they realized a profit for the first time in several years. Increased cattle prices was the contributing factor. (6) There was very little change in the profit realized by crop farmers compared to 1977. Higher prices were received for some crops, however, this was offset by increased production costs.

TIWARY, Satya Narayan. "An Assessment of Characteristics and Needs of Small Scale Farmers in South Eastern Ohio." Master of Science Thesis, 1979, The Ohio State University, Columbus.

Purpose. The major purpose of this study was to assess small-scale farmers' general characteristics, educational needs, information-seeking behavior and major problems and concerns.

Method. A descriptive survey research using mailed questionnaire was employed to collect data for this study. A substantially large proportion of the owner-operators operate on farm size small enough to generate sufficient income from their farms. Majority of them are part-time farmers.

Findings. Soil-management practices, livestock production and management, and farm management and farm record keeping were the areas in which the small scale producers in this region expressed greater degrees of help. The Cooperative Extension Service was found to be much frequently used source of farm information. Nevertheless, informal sources like friend, relative, neighbor, and progressive farmer were also found to be equally used by the small-scale farmers.

WOLFE, Christopher E. and McCRACKEN, J. David. "Time Utilization by Vocational Agriculture Teachers." Staff Study, 1978, The Ohio State University, Columbus.

Purpose. The major purpose of the study was to develop and test a procedure for recording the use of time by vocational agriculture teachers.

Method. The procedure involved these steps: (1) Literature was reviewed. (2) Input of state supervisory and teacher education staffs was obtained. (3) The instrument was developed. Time was to be recorded in one of 16 categories. (4) Selection of pilot group of 15 teachers was accomplished. (5) The pilot group was oriented. (6) Data were collected. A seven-week period was used. Each teacher recorded information for one assigned day each week. By the end of the seventh week, each teacher had provided information for each of the seven days of the week. (7) Response rate was 100 percent. (8) Tables were computer generated.

Findings. Production agriculture teachers worked 57.4 hours per week and non-production agriculture teachers worked 49.7 hours per week. Teachers who worked a higher number of hours devoted considerably more time to FFA activities than teachers working fewer hours. The instrument and procedure was judged appropriate for use on a larger scale. It was recommended that a year-around data gathering procedure be employed because of seasonal differences in work load.

OKLAHOMA

AL-ZAIDI, Abdullah Aoudh. "Perceptions of Professional Agriculturalists in the Eastern Province of Saudi Arabia Relative to Recommendations for Training Programs for Future Employees." Master of Science Report, 1979, Oklahoma State University, Stillwater.

Purpose. The purpose of this study was to determine the relative importance of certain selected items in the training program for extension workers and experiment station workers in the Eastern Province of Saudi Arabia.

Method. In this study responses were secured from personal interviews with 31 agricultural extension workers and 29 experiment station workers located in the Eastern Province of Saudi Arabia. An extensive review of literature dealing with job functions and analysis of workers responses was also completed. Respondents were asked to give a judgement as to relative importance of selected items classified under: (a) Sources of recruitment, (b) Level of training desirable, and (c) Items of training curriculum. A Likert type scale was used to obtain the requested responses.

Findings. A majority of responses centered in the area of expressing the items as "important". Differences found in judgements between groups and subgroups followed a pattern which (1) reflected the different educational background currently existing between two subgroups, native Saudi and non-Saudi workers and (2) the fact that many of the Saudi extension workers have little more than a high school education. The non-Saudi workers who had often had training in their home countries appear to be somewhat more traditional in their responses. In general, differences between the two groups, experiment station workers and extension workers, showed that experiment station workers had somewhat more concern about levels of training and curriculum training items for extension workers than did the extension workers themselves.

Recommendations included items dealing with: (1) Allocation of resources for training curriculum, (2) More thorough integration of certain items of training curriculum, (3) Provision of internships and induction training programs for both professional groups, and (4) More detailed planning of induction programs for non-Saudi workers.

BENAISSA, Habib Missaoui. "A Study of Shop Design Organization and Management Features in Selected United States Shops; with Implications for the Forestry Department Shop in Tunisia." Master of Science Report, 1979, Oklahoma State University, Stillwater.

Purpose. The purpose of the study was to observe and investigate certain selected procedures and activities in use in selected United States educational and commercial machinery shops, in order to select some apparent successful practices and techniques, and recommend their application in Tunisian Department of Forestry heavy equipment shop.

Method. Method of study constituted: (1) an extensive review of pertinent literature and materials; (2) observation of design features and organizational practices by the author through different visits to nine shops; and (3) development and administration of a questionnaire sent to respondents employed in the Department of Forestry in Tunisia.

Findings. The findings indicated that in the U.S., the educational machinery shops were better designed and exhibited a higher performance in organization and management practices than the commercial shops in the United States. The following factors were identified as possible handicaps to the modernization and maintenance of an effective and successful organization of the Forestry Department shop: (1) lack of adequate design features of the shop; (2) inappropriate and ineffective organization system; (3) financial problems and bad management procedures; (4) lack of adequate tools and equipment; (5) poor working conditions and unskilled employees.

DAYRIT, Ruben Serrano. "An Assessment of the In-Service Training Needs of Vocational Agriculture Teachers and Agricultural Extension Workers in Micronesia." Master of Science Report, 1979, Oklahoma State University, Stillwater.

Purpose. The purpose of the study was to determine what are the in-service training needs of the vocational agriculture teachers and agricultural extension workers in Micronesia.

Method. The objectives of the study were: (1) to identify and rank vocational subject areas according to importance as to their in-service training needs, as perceived by the Micronesian vocational agriculture teachers; (2) to identify and rank selected units of instruction found in the core curriculum of each subject area according to their importance as in-service training needs, as perceived by the Micronesian vocational agriculture teachers; (3) to identify and rank selected areas in agricultural extension according to importance as to their in-service training needs, as perceived by the Micronesian agricultural extension workers; (4) to identify and rank extension teaching components of selected areas in agricultural extension according to their importance as in-service training needs as perceived by the Micronesian extension workers; and (5) to determine the most appropriate time of the year for conducting in-service training programs for vocational agriculture teachers and extension workers in Micronesia. The procedures used were the review of literature and the sending of questionnaires to 25 vocational agriculture teachers and 40 extension workers. The data were based on the completed questionnaires.

Findings. The vocational agriculture teachers considered training in Vegetable Production, Swine Production and Poultry Production more important than training in Commercial Crops Production and Farm Mechanics. The agricultural extension workers put more importance on training in extension methodology, vegetable production, swine production, and commercial crops production, than in poultry production and beef cattle production. The agriculture teachers and extension workers expressed greater need for training on varietal selection, land preparation and cultural requirements of crops, and breed selection, feeding and housing of animals than on marketing and record keeping. Summertime was considered to be the most appropriate time of the year for conducting in-service training programs by the vocational agriculture teachers and extension workers in Micronesia. In-service training is needed in some areas in order to help the vocational agriculture teachers and extension workers maintain and improve their professional competencies.

ELAJILI, Hedi F. "A Study of Techniques Practiced in Erosion Control in the Stillwater Creek, Oklahoma, Watershed with Implications for the Chaal Watershed in Tunisia." Master of Science Report, 1979, Oklahoma State University, Stillwater.

Purpose. The purpose of the study was to examine the frequency certain selected soil conserving techniques were practiced in the Stillwater Creek watershed, Oklahoma, U.S.A., and to compare such usage with practices in the Chaal watershed, Tunisia.

Method. Methods of study included: (1) a comprehensive review of relevant literature, and (2) development and administration of an interview schedule to respondents knowledgeable about the extent of practice usage in the two watersheds.

Findings. The findings revealed that with regard to most soil conservation practices, frequency of usage appeared to be similar in both watersheds. Those practices which appear to be quite different in frequency of usage were: (1) farm ponds, (2) flood retarding structures and (3) windbreaks.

GORDON, Monica. "Teachers' Responses to the Development of Curriculum Modules for Grade Seven Agricultural Science Students in Jamaica." Master of Science Report, 1979, Oklahoma State University, Stillwater.

Purpose. The study was conducted among teachers of agricultural science to determine if they would welcome the development and use of curriculum modules for grade seven students.

Method. Information for the study was obtained through a questionnaire that included a sample of a curriculum module. The module was used to enlighten the teachers as to the format a curriculum module may take. They were asked to respond, based on the format, as to whether such an approach would be feasible for grade seven students.

Findings. The study showed that the teachers would accept curriculum modules for grade seven students. It revealed that most teachers were ignorant about curriculum modules. Schools had very limited amounts of audiovisual aids and other resource materials for class use. Where there were audiovisual aids, the television and overhead projector were the most common. It was further discovered that the lecture-discussion method of instruction was the most popular method of instruction for these teachers. They claimed lecture-discussion was best suited to the large classes they had. Average class size was 32 in rural schools and 33 in urban schools.

LAING, Lincoln Montgomery. "An Assessment of Agricultural Development and Education in Jamaica with Implications for the Future." Master of Science Report, 1979, Oklahoma State University, Stillwater.

Purpose. This study assessed Jamaica's Agricultural and Education Development with the hope of making recommendations for improvement in the future.

Method. The study took the form of interviews with 85 practicing farmers and 87 questionnaires with non-farmer Agriculturists. Farmers provided information on their family, education, agricultural production and general farming problems. Respondents on the questionnaires furnished information on the extension service, agricultural education, agricultural production, administration, finance and politics affecting agriculture. Information was assessed on percentages and scales ranging from strongly agree to strongly disagree, from a very great extent to not at all; from always to never, and from improved to remained stable.

Findings. Analysis indicated that the extension service, small farmers, democratic Socialism and land reform have made significant contribution to the development of agriculture. The large farmer, marketing facilities, sugar and banana industries, and mechanization have suffered adversely and have made little contribution to farming. There were definite problem areas like incentives to farmers, function of the private sector in agriculture and the inadequate financing of agricultural education. The author recommends that there be better financing of education, efficient monitoring and forecasting of farm production, greater incentives to people involved in Agriculture.

MELENDEZ, Ruperta. "Development of Guidelines for the Student Teacher Training Program at Maturin-Venezuela." Master of Science Report, 1979, Oklahoma State University, Stillwater.

Purpose. The basic purpose of this study was to gather and evaluate the opinions of the college supervisors, cooperating teachers, and student teachers regarding the student-teacher training program at the Instituo Universitario Pedagogico Experimental de Maturin.

Method. Questionnaires were administered to college supervisors, cooperating teachers and student teachers regarding the student teaching training program at the Instituo Universatario Pedagogico Experimental de Maturin.

Findings. It was established that the college supervisor and the cooperating teacher should have a minimum number of years of experience associated with the training program. The selection of the centers, the subject matter and placement of the student teacher should be based upon the needs of the student and the program. The program should be offered more often and in certain months of the year according to the needs of the student teachers. The training program should start early and be divided into three stages. All the components of the student teacher training program should have specific responsibilities in order to make the program successful. The student teacher should complete all the requirements of the student teacher training program in order to complete successful training. As a result of the findings, a guideline was developed for the student teacher training program of Maturin, Venezuela.

RUDOLPH, James Andy. "Selected Characteristics of Equine Education Programs at Colleges and Universities." Doctor of Education Dissertation, 1979, Oklahoma State University, Stillwater.

Purpose. Due to the lack of information concerning equine education, this study was conducted to determine selected characteristics of equine programs at colleges and universities in the United States.

Method. The characteristics investigated were: (1) institutional, state and area information, (2) academic opportunities and extra curricular activities, (3) curriculum and related factors, (4) breeds and uses of horses, (5) availability of facilities, (6) program funding, (7) faculty and staff data, (8) attitudes toward and status of programs. Eighty-eight responding institutions were classified as minor and major programs by concentraion of equine offerings.

Findings. Equine education programs in colleges and universities have experienced a surge in national growth. Numerous programs have originated within the last few years. The greatest concentration of equine programs are in schools with enrollment less than 5,000 and more than 20,000 students. Course offerings exceeding 12 semester hours equivalency are offered in a majority of programs. Most programs include both management and equitation courses in their curriculum.

Even though some institutions are reluctant in offering equine programs, many schools view them as a means of attracting potential students and complementing existing curriculum.

FORSYTHE, Steven William. "An Assessment of Community Relations Activities used by Oklahoma Vocational Agriculture Teachers." Master of Science Report, 1979, Oklahoma State University, Stillwater.

Purpose. The purpose of this study was to analyze community relations activities engaged in by Oklahoma agriculture teachers and to determine if there are differences by size of community and by number of agriculture teachers in the program.

Method. The data for the study were collected from questionnaires received from 72 agricultural departments across the state of Oklahoma.

Findings. Information in the study revealed that multiple teacher departments in larger communities used Mass Media activities most often. Overall, the Public Relations area of Mass Media was used in the least across the state. Multiple teacher departments in smaller communities used Chapter Program of Work Activities most often.

A planned program of educational meetings on effective use of Mass Media should be provided for agriculture teachers. FFA programs such as BOAC, Food for America, and Chapter Safety should be used more across the state. An agricultural education course should be developed for undergraduates on community relations for vocational agriculture. Further studies on community relations should be continued on a regional or national level.

SHARBER, John Elbert. "Comparative Analysis of Multiple Teacher Departments of Vocational Agriculture in Oklahoma." Master of Science Report, 1979, Oklahoma State University, Stillwater.

Purpose. This study compares the financial, responsibility and student requirements of multiple teacher departments of vocational agriculture in Oklahoma.

Method. The 59 participants were presently teaching in multiple teacher departments of vocational agriculture in Oklahoma. The individual's response was recorded on a questionnaire. The results of the study were given using a percent score.

Findings. Analysis indicated some differences in financial support of different vocational agriculture departments. The main responsibilities of each teacher did not vary to a great degree, but the requirement of the students in different departments was slightly different. The teachers do not follow a printed guideline which would help to close some of the large differences which exist. The author suggests the teachers should communicate very closely with themselves, their students and administration.

STILES, Thomas F. "A 1979 Study on the Status of Vocational Agricultural Occupational Training Programs in Oklahoma." Master of Science Report, 1979, Oklahoma State University, Stillwater.

Purpose. The purpose was to evaluate the current status of the Vocational Agricultural Occupational Training Program in Oklahoma.

Method. Four major areas were surveyed to determine the current status: administration and operational characteristics, student selection, selection of training stations, and curriculum. Some of the questions which were asked were identical to the ones Duncan surveyed in his 1973 report.

Findings. Multi-teacher departments assign one teacher full responsibility for teaching the VAOT program. Training plans and supervisory visits are an important part of the VAOT learning experience. Teachers are presently visiting the student on-the-job fewer times than in 1973. The grade of the student is influenced by the employer's evaluation. VAOT forms are not emphasized by VAOT teachers. Methods of instruction reflected a greater use of individual instruction and group instruction.

Training stations should be agricultural-related, and the firm should have a good reputation. Supervision and cooperative attitude of the employer were important considerations when selecting a good training station. Curriculum status was adequate, but more support materials needed to be developed in individual instruction. Teachers felt an introduction to the VAOT program should be a part of the teacher education curriculum at the university.

WHITE, James David. "Identification and Comparison of Factors Influencing Oklahoma Vocational Agriculture Instructors to Remain in the Profession." Doctor of Education Dissertation, 1979, Oklahoma State University, Stillwater.

Purpose. The purpose of this study was to identify and compare selected factors influencing teachers of vocational agriculture to continue their careers in the teaching profession.

Method. Questionnaires were mailed to the 256 teachers with five years or more teaching experience in late August, 1978 to gather data for the research effort. Two hundred sixteen Oklahoma vocational agriculture teachers (84.38%) participated in the study. Teachers were divided according to the five supervisory districts in which they taught and six experience groups according to the number of years teaching experience.

Findings. Responses of vocational agriculture teachers in Oklahoma when categorized by district and experience group did not vary a great deal. Differences in degree of influence were evident when factors were identified as being tangible or intangible. The major areas of influence included FFA and adult farmer organizational activities, teaching situation, community support, professionalism, administration and supervision, family and personal opportunities, advancement and security, facilities and equipment and monetary considerations. The least influential were the tangible factors, particularly among facilities and equipment and monetary considerations. Oklahoma vocational agriculture teachers are influenced to continue in their chosen career as the result of interactions among a combination of factors.

OREGON

HALL, David E. "Animal Science Competencies Needed by Vocational Agriculture Graduates in Wallowa County." Masters of Education Research Paper, 1979, Oregon State University, Corvallis.

Purpose. The purpose of this study was to determine the importance of selected competencies to the animal science industry of Wallowa County and to determine if there was a significant difference in the importance placed upon the competencies by livestock producers and vocational agriculture instructors of Wallowa County.

Method. A survey of 120 selected animal science competencies was mailed to 100 livestock producers. This covered a large producer population and a cross section of the county. The survey requested rankings of: (0) no opinion, (1) not important, (2) nice to know, (3) important, and (4) essential. Responses were received from 61 producers. All four of the county's vocational agriculture instructors responded. The data gathered was compiled and analysed through the use of statistical techniques and a computer program. Tables were compiled with the following critirias: (1) rank by producer mean, (2) instructor rank by mean, (3) means, (4) standard deviations, (5) mean difference, (6) T-value, and (7) 2-tail probability.

Findings. Major findings of the 120 competencies of this study were as follows: the producers rank only two as essential, these were; (1) determine when to call a veterinarian, and (2) keep financial records. Fifty-two competencies were ranked as important by the producers and 66 competencies were rated nice to know by the producers. The instructors rated seven competencies considerably lower than the producers and 21 competencies considerably higher than the producers.

KLUCKMAN, Delores M. "Traditional and Nontraditional Career Role Vocational Agriculture Teacher Perception of Career Choice, Work Satisfaction, and Career Plans." Doctorate of Education Thesis, 1979, Oregon State University, Corvallis.

Purpose. The purpose of this exploratory study examined whether nontraditional career role (female teachers in vocational agriculture differ significantly from traditional career role (male) teachers in vocational agriculture on perceived (a) events in career choice, (b) work satisfaction, and (c) future career plans.

Method. A mail survey instrument was developed, pilot tested, and administered to a random sample of male and female vocational agriculture teachers in California, Florida, Ohio, New York, and Virginia. The sample for the study consisted of 116 male and 116 female secondary vocational agriculture teachers who had taught seven years or less. The Student "t" statistic was used to analyze contrast among the mean scores for each of the instrument statements related to career choice influence, work satisfaction, and future career plans.

Findings. Statistically significant differences were found for each of the three areas studied. (a) In relations to career choice, female vocational agriculture teachers were more positively influenced by mother or mother figure and peer of the opposite sex, than male vocational agriculture teachers were. However, the male vocational agriculture teachers reported that FFA, high school courses, and high school vocational agriculture teacher were more influential on their career choice than the female vocational agriculture teachers reported. (b) In relation to work satisfaction, female vocational agriculture teachers were less satisfied with feedback on performance, stress inoculation, and recognition than male vocational agriculture teachers. Female vocational agriculture teachers were more satisfied with salary than were male vocational agriculture teachers. (c) In relation to career plans for the coming year, male vocational agriculture teachers perceived a greater possibility than female vocational agriculture teachers of remaining in the present teaching position, becoming a department head, and leaving teaching for either a vocational agriculture-related job, or farming or ranching. Five years into the future, female vocational agriculture teachers perceived a greater possibility than male vocational agriculture teachers of leaving teaching permanently for a non agricultural related career change or full-time homemaking. The female vocational agriculture teacher also saw part-time employment, as a homemaker and as a teacher, as a greater possibility in five years than did the male vocational agriculture teacher.

PENNSYLVANIA

APPLE, Roger "Comparison of Student Involvement in the FFA-Vocational Technical School and the Comprehensive High School." Master of Education Paper, 1979, The Pennsylvania State University, University Park.

Purpose. This study focuses on the Future Farmers of America (FFA) and Supervised Occupational Experience (SOE) involvement of high school vocational agricultural students. Recognizing the FFA and SOE as important phases of the vo-ag program, the study was designed to determine whether these activities could be carried out more effectively in vo-ag programs conducted in the comprehensive high school or at an area vocational technical school (AVTS).

Method. The data needed for the study was collected through the use of two questionnaires. These forms had questions dealing with various phases of FFA involvement and SOE activities. One form was designed for the FFA advisors and the other for the senior vo-ag students. Twelve Pennsylvania high schools and six AVTS's offering vo-ag were randomly selected.

Findings. Four questions were raised in the study dealing with the importance of the FFA, type and level of FFA involvement, factors limiting students' FFA involvement, and type of SOE projects. These questions were analyzed on a comparative basis between the high school vo-ag programs and the AVTS programs. There was no significant difference between responses from the high school students and the AVTS students except those concerning the SOE projects conducted by the students. There was a noted difference between responses from the high school teachers and the AVTS instructors in regards to those factors which limit students' FFA involvement.

CHEN, Yee Ching "The Assessment of Agricultural Education Courses and Factors Influencing the Career Goals of the Junior and Senior Students." Master of Science Thesis, 1979, The Pennsylvania State University, University Park.

Purpose. For youth, occupational choice is a complex problem. It is important for teacher educators to know what students' career interests are, and the reasons and factors that influence students' decisions on occupational choice. The purposes of this study were to assess agricultural education courses as rated by junior and senior students in the Department of Agricultural Education, The Pennsylvania State University, and to identify the students' career decisions and the factors which influenced their career choices.

Method. By means of a questionnaire the students in 7th through 12th terms majoring in agricultural education were surveyed. There were 38 students surveyed, 23 males and 15 females. The survey was completed during the Spring Term, 1978.

Findings. For the 38 junior and senior students, approximately 59 percent were to teach in agriculture; 5.3 percent were planning to be elementary teachers; 3.8 percent opted to work in farming; and the remaining of the respondents were to engage in agricultural business.

Ag.Ed. 12v Methods of Teaching Agriculture, Ag. Ed. 14v Student Teaching in Agriculture, Ag.Ed. 22v Methods of Teaching Agricultural Mechanics, and Ag.Ed. 420v Instructional Media in Agriculture were rated higher than the other agricultural education courses. In technical subject matter areas, the business and management courses were rated lowest, and the courses of animal science, plant science, and agricultural engineering were rated higher.

The quality of instruction for agricultural education courses was rated on a par with the instructional areas for student teaching, animal science, plant science, and agricultural engineering.

The respondents were satisfied with the quality of advising. The quality of advising was rated above the medium value of three.

The respondents considered self-interest and personal social participation to be the most influential factors in selecting career goals.

CUDJOE, Kwamena A. "Investment in Agricultural Research and Extension: Analysis and Implications for Agricultural Innovations with Respect to Cocoa Production in Ghana." Master of Science Thesis, 1979, The Pennsylvania State University, University Park.

Purpose. Ghana, a country on the West Coast of Africa, has been a major producer of cocoa for the past five decades. However, the production of cocoa has declined considerably over the last decade, leading to a major strain on the country's economy. Though various factors have been cited as the causes of this decline, one area of cocoa production that has received little scrutiny is the assessment of the research and extension.

The purpose of this study was threefold: (1) to describe research and extension activities; (2) to examine the effect of research and extension on the physical productivity of cocoa; and (3) to determine the rate of return of research and extension expenditure on cocoa.

Method. Four hypotheses were formulated to test the relationship between the physical output of cocoa and: 1) research and extension expenditures; 2) producer prices; 3) weather; and 4) the sale of Gammalin insecticide.

The methodology used was the concept of production function and multiple regression with least squares estimation, to statistically test the hypotheses. Time series data on the total production, producer prices, research and expenditure, and the number of gallons of Gammalin insecticide sold for the period under study, 1950-51 to 1974-75, were used.

Findings. The results of this study show that price, research expenditures, rainfall and Gammalin sales have an impact on the physical output of cocoa in Ghana. Extension expenditures, on the other hand, had negative impact on the cocoa output. Furthermore, the rate of return on investment in research in cocoa was found to be high while that of investment in extension was again negligible.

Evidence that emerged from the study indicated a high rate of return on investment in cocoa research and provides a framework for decision making in the allocation of resources for cocoa research and extension.

CURTIS, Samuel M., and Robert A. MARTIN "Competency Development of Beginning and Intern Teachers of Vocational Agriculture." Staff Study, 1978-1979, The Pennsylvania State University, University Park.

Purpose. The purpose of this project was to provide assistance to beginning and intern teachers of agriculture to assure competency development in teaching methods, program planning, vocational youth organization development and aid in meeting the vocational needs of disadvantaged and handicapped students of vocational agriculture. Through this project 17 master teachers provided support and supervision to 40 beginning teachers of agriculture.

Method. Beginning teachers of vocational agriculture are certified either as Instructional I, Teaching Intern, Vocational Intern, or Emergency. During the 1978-79 school year, certification status of beginning teachers of agriculture was: Instructional I, 19; Teaching Intern, 17; Vocational Intern, 3; and Emergency, 1. Additionally, 26 other intern teachers in the final stages of completing Instructional I requirements were assisted through this project.

Beginning and Intern Teachers participated in a Summer Workshop in August, 1978; a Fall Seminar in November, 1978; and a Spring Seminar in April, 1979. Master teachers made contact with the beginning and intern teachers by direct supervisory visits to the clients schools, telephone, visits of clients to master teacher schools and Fall and Spring Seminars, as well as other contacts. Master teachers filed written reports upon the completion of these visits and contacts. In addition, a list of pedagogical competencies needed by beginning teachers of agriculture validated by Hawk (1977) provided the base for individual instruction and supervision. Each beginning teacher evaluated his own competency with the competency list. Ratings were made on a scale of 1 to 4 with the higher number representing the higher self-rating. These ratings were made at the beginning of the school year and again at the end.

Findings. The results of this project are as follows: (1) Master teachers averaged 21.1 hours of supervision per beginning or intern teacher. Combined with supervision by university staff, clients on the average received 25.9 hours of supervision through this project. (2) A study of the mean pre-post self-ratings of beginning teachers of agriculture in this project indicates an improvement in competency in the areas rated over the school year. It must be assumed that some of this competency was acquired through this project. Competency in methods of teaching agriculture showed a mean of 2.74 (pre) and 2.97 (post). Competency in methods of teaching agricultural mechanics showed a mean of 2.70 (pre) and 3.11 (post). Competency in program planning showed a mean of 2.67 (pre) and 3.14 (post). General pedagogical competencies I showed a mean of 2.67 (pre) and 2.94 (post) and general pedagogical competencies II showed a mean of 2.61 (pre) and 2.86 (post), (on a scale of 1-4). (3) Of the 40 teachers who participated in this project, 33 remained in teaching, two left teaching to return to farming, two took positions in agri-business, one left teaching to enter the extension service, and the status of two is unknown at this time.

DUNCAN, Kerry W. "The Development And Evaluation of a Linear Program Of Instruction For The Disassembly, Repair, And Assembly Of Selected Small Gasoline Engines." Master of Education Paper, 1978, The Pennsylvania State University, University Park.

Purpose. The purposes of this study were: 1) to develop a linear program of instruction for the disassembly, repair, and assembly of one brand of small gasoline engine, and 2) to compare the competency of those students who used the linear program with those students who did not use the linear program of instruction.

Method. A linear program of instruction was developed and tested with the tenth grade Vocational-Agricultural students from the Northwestern School District attending Erie County Technical School.

Two different sections of students received instruction in small gasoline engines. One section was randomly assigned to use the linear program; the other section did not use the linear program of instruction.

Students regardless of the use or non-use of the linear program were randomly assigned a pre- and post-test in one of three competency areas. The competency areas were 1) carburetion, 2) ignition, or 3) valves, rings, piston, and crankshaft. Mean pre- and post-competency scores were compared.

Findings. Although mean scores increased as measured by pre- and post-test in the competency areas, the increase was found to be independent of the use of the linear program or the student's practical experience with small gasoline engines.

FRITZ, Rickey L. "The Development and Evaluation of a Self-Instruction Manual for Arc Welding for the Vocational Agriculture Program at Kane High School." Master of Education Paper, 1979, The Pennsylvania State University, University Park.

Purpose. The purposes of this study were: 1) to develop an individualized manual of instruction for arc welding, 2) to compare the results of a pre- and post-test given to a group of sophomore students at Kane High School.

Method. An individualized manual of instruction was developed and used in the sophomore arc welding class at Kane High School for a period of 18 weeks. The same pre- and post-test was then evaluated for mean, mode, median, standard deviation and skewness.

Findings. The group tested showed an increase in scores from the pre- to the post-test with the mean and median scores increasing 20 points from pre- to post-test. The pre- and post-test scores were both positively skewed.

GUYER, William H. "An Evaluation of the Small Engine Mechanics Competencies as Reported by The National Ag Occupations Competency Study." Master of Education Paper, 1979, The Pennsylvania State University, University Park.

Purpose. The purpose of the study was to locally validate the list of competencies for the small engine mechanic as listed by the National Ag Occupations Competency Study (McClay, 1978) and also the competency ratings of mechanics as compared to supervisor ratings.

Method. A survey was mailed to small engine shops in Erie County listing the competencies as listed by the National Ag Occupations Competency Study. The survey contained 77 individual competencies and was placed into 13 major competency areas which were: 1) Communication, 2) Service Manuals Usage, 3) Office Procedure, 4) Power and Hand Tool Usage, 5) Malfunctions Diagnosis, 6) Electrical Systems, 7) Governing Systems, 8) Lubrication Systems, 9) Cooling Systems, 10) Gas and LP Fuel Systems, 11) Engine Rebuilding, 12) Clutch Systems, and 13) Safety Procedures. The respondents were also divided into mechanics and supervisor groups. The individual competencies were rated by each respondent as being (4.0) essential, (3.0) important, (2.0) of some importance, (1.0) not important, and (1.0) does not apply. The results were then averaged and compared to the national study. The results were also compared within the study by mechanics and supervisors.

Findings. Conclusions drawn from the Erie study showed that: 1) The competencies for small engine mechanics as listed by the National Ag Occupations Competency Study are valid locally, and can be used effectively for competency training. 2) The small engine mechanics competency list can be used for curriculum development by instructors teaching small engine mechanics.

OJOKO, Sydney S. "An Assessment of the Agricultural Extension Service Programs in Rivers State of Nigeria." Ph.D. Dissertation, 1979, The Pennsylvania State University, University Park.

Purpose. The purpose of this study was to assess the Rivers State Agricultural Extension Service Programs as perceived by five groups within the extension service.

Method. The study identified five groups within the extension service: the administrators, extension officers, educators, students and farmers, whose assessments were analyzed. The questionnaire by Young and Cunningham (1977) and a general survey, consisting of 77 questions, were developed and administered to 212 persons who participated in the study.

Findings. 1) Community participation in the extension process was non-existent, leading to a very low rating of the extension programs. 2) The younger members of the extension service favored educational (training) programs while the older groups favored informational (extension) aspects of the extension programs. 3) The attitudes of the participants toward agricultural development were generally positive but with some negativism caused by fund and land limitations. 4) There was a significant relationship between vocational agriculture with supervised agricultural experience in high schools and career choices of the extension personnel within the state.

The study concluded that community participation would give the extension clientele a better insight into the working relations of the extension service. Liberal credit and land-use development programs would encourage more people to choose a farming career. An agricultural curriculum, with supervised experience, is more likely to encourage high school graduates to choose an agricultural career.

Future extension programs for the state should emphasize informational (extension) aspects for the old, and educational (training) programs for the youth.

SHIPPY, Richard Dean. "Pedagogical Competency Needs of Beginning Teachers of Agriculture/Agribusiness Education in Delaware." Ph.D. Dissertation, 1979, The Pennsylvania State University, University Park.

Purpose. The purpose of this study was to identify and verify the pedagogical competencies needed by beginning teachers of agriculture/agribusiness education in Delaware. This study provided information that facilitated the redirection of the undergraduate program in Agricultural Education at the University of Delaware into a competency-based format.

The population for this study consisted of all 19 inexperienced teachers, and all 28 experienced teachers of agriculture/agribusiness education, and 21 local school supervisors of agricultural education in Delaware.

Method. A survey instrument was developed using Cotrell's et al. (1972b) list of 384 competencies identified as needed by teachers of vocational education and Matteson's et al. (1974) list of professional competencies needed by vocational instructors in agriculture. The lists of competencies were rewritten to make them applicable to agriculture/agribusiness education in Delaware. An advisory committee of teachers, teacher educators, and the state supervisor reviewed the competency lists. The final instrument contained 250 competencies in the categories of program planning, development and evaluation, planning of instruction, execution of instruction, evaluation of instruction, student vocational organization, supervised occupational experience, management, guidance, school-community relations, and professional role and development.

A five-point Likert scale was used by the respondents to indicate the level of mastery necessary for each pedagogical competency for entry level employment as a beginning teacher of agriculture/agribusiness education in Delaware. A questionnaire was used to obtain demographic data from the two groups of teachers.

Findings. The principle findings of this study were: 1) Two hundred forty-six of the 250 competencies were identified by the three groups as being necessary for entry level employment as a beginning teacher of agriculture/agribusiness education in Delaware. 2) The two groups of teachers and the group of local school supervisors perceived the competency level needed by a beginning teacher of agriculture/agribusiness education to be primarily the same. Only 15 of the 250 competencies were rated significantly different by the three groups surveyed. 3) Size of agriculture department, number of different students taught each day, previous enrollment in vocational agriculture in high school, and FFA experience in high school had influence upon the incumbent teachers' views concerning the importance of pedagogical competencies necessary for a beginning teacher of agriculture/agribusiness education in Delaware.

WITMER, Bruce L. "Professional Education Competencies Needed by Beginning Teachers of Agriculture/Agribusiness Education in Pennsylvania." Doctor of Education Thesis, 1979. 170p., Library, The Pennsylvania State University, University Park.

Purpose. The purpose of this study was to identify and verify the professional education competencies needed by beginning teachers of agriculture/agribusiness education in Pennsylvania in the areas of management, guidance, school-community relations, and professional role and development. This study provided information that aided in completing the redirection of the undergraduate program in Agricultural Education at The Pennsylvania State University into a performance and competency-based format.

Method. The population for this study consisted of all 50 cooperating teachers, 39 inexperienced teachers, and 29 intern teachers of agriculture/agribusiness education, 10 state staff for agricultural education and 9 teacher educators in agricultural education in Pennsylvania.

A survey instrument was developed using Cotrell's et al. (1972b) list of 137 professional education competencies identified as being needed by teachers of vocational education in the areas of management, guidance, school-community relations, and professional role and development. The list was re-written to make the competencies applicable to agriculture/agribusiness education in Pennsylvania. A screening committee of twelve former cooperating teachers reviewed the list of 137 competencies. The final instrument contained 112 competencies in the areas of management, guidance, school-community relations, and professional role and development.

A five-point Likert scale was used by the respondents to indicate the level of mastery necessary for each professional education competency for entry level employment as a beginning teacher of agriculture/agribusiness education in Pennsylvania. A questionnaire was used to obtain demographic data from the cooperating teachers, inexperienced teachers, and intern teachers.

Findings. Four null hypotheses were formulated and tested. The significant findings of this study are as follows: 1) One hundred seven of the 112 competencies were identified by the five groups as being essential for entry level employment as a beginning teacher of agriculture/agribusiness education. 2) The three groups of teachers, the state staff, and the teacher educators perceived the competency level necessary for a beginning teacher of agriculture/agribusiness education to be primarily the same. Ten of the seventeen competencies, that were rated significantly different by the five groups, were the same competencies. 3) Previous enrollment in vocational agriculture in high school, FFA experience in high school and/or college, and highest college degree earned had influence upon the incumbent teachers' beliefs regarding the importance of professional education competencies necessary for a beginning teacher of agriculture/agribusiness education in Pennsylvania.

RHODE ISLAND

MAINE, Ronald A. "A Personal Learning Experience in the Design and Administration of a Workshop on Commercial Fisheries in the Azores Islands." Supervised Field Practicum, Master of Arts, 1978, University of Rhode Island, Kingston.

Purpose. The purpose of this practicum was to provide the author with increased knowledge and skill in workshop design and administration as well as increased skill in the area of needs assessment programs in the area of fisheries development.

Method. The author achieved the objectives of the practicum by: (1) reviewing existing literature pertinent to the objectives, (2) attending a workshop design program, (3) interviewing resource persons in the field of fisheries development, (4) interviewing resource persons in the area of needs assessment, (5) designing a needs assessment workshop, (6) conducting a needs assessment workshop, (7) receiving the evaluations of experts concerning the accuracy of the needs assessment.

Findings. The practicum enabled the author to gain increased confidence in his ability to design and conduct a program that would successfully assess the needs of a developing nation's fishing industry.

NERO, John L. "Developing Skills in Identifying, Gathering, Prioritizing, Organizing, and Communicating Information." Supervised Field Practicum, Master of Arts, 1978, University of Rhode Island, Kingston.

Purpose. The purpose of this practicum was to provide the author with specific skills in presenting information. These skills included the following: identifying the kind of information to be presented, gathering the information, setting priorities on the depth and breadth, organizing the information so that it can be easily located and understood, using clear English for effective and interesting communication, and using graphic techniques for display and illustration.

Method. The author achieved these objectives by (1) developing an information product entitled Helping Adults Finance Education, A Guidebook for Resource People, and (2) presenting the product to appropriate experts for comment and critique.

Findings. Participation in the practicum enabled the author to gain the insights in each skill area. In identifying information he learned the importance of beginning with clearly established limits and of the problems in taking one's own knowledge for granted. In gathering information he learned the value of critically questioning information sources and of going directly to original sources as soon as they are identified, rather than relying on interpretations which are several times removed. In prioritizing information, he learned to start with a clear idea of who will be using the information and their purposes. In organizing information he learned to let form follow function and to recognize "force fits" as indicating problems in overall organizational structure. In communicating information verbally, he learned that a poorly phrased sentence often results from poorly conceived thought and that he is most comfortable writing in the first person. And in communicating graphically he learned that graphs are more valuable to him for organizing thoughts than for presenting information, but if they are used, they should be simple and their purpose should be explained clearly.

NEUMANN-HYDE, Jeannie E. "Facilitating Self-Direction in Adults." Supervised Field Practicum, Master of Arts, 1978, University of Rhode Island, Kingston.

Purpose. The purpose of this practicum was to improve the author's ability to facilitate self-direction in adult students. Self-direction was defined as "the ability to direct and to control one's own life; a level of personal development emphasizing self-awareness, self-acceptance, assertiveness, and autonomy."

Method. In order to meet this practicum's purpose, the author focused on the self-directed learning process as an important element of self-direction. She identified five competencies basic to self-directed learning: diagnosing interests and needs, formulating learning objectives, determining suitable learning formats, developing and utilizing learning resources, and documenting and evaluating learning. These five competencies formed the core of the author's learning objectives.

The author achieved her learning objectives for this practicum by: 1) gathering literature and ideas for workshop designs related to the above five competencies, 2) reading and annotating selected written materials, 3) listing relevant experiential activities to use in designing, 4) designing a mini-workshop in each of the five competencies, and 5) combining these mini-workshops sequentially into a day-long workshop, entitled "Toward Self-Directed Learning," and conducting this workshop at an alternative university.

Findings. As an outcome of this practicum, the author gained experience and increased her skill in teaching self-directed learning skills. She developed an appreciation for the fact that teaching self-directed learning skills is not necessarily the same as facilitating self-direction in adults. Additionally, her basic approach to teaching these skills changed. Instead of insisting that students demonstrate an understanding of a particular theoretical framework or specific skill, the author now emphasizes that students develop self-awareness and self-acceptance of their own self-directed learning style. This change in the author's teaching approach is evidence of her increased trust and respect for adults as self-directed learners -- the most significant outcome of this practicum.

TAJI, Judith Reilly. "Developing a Teen Fire Safety Training Program." Supervised Field Practicum, Master of Arts, 1979, University of Rhode Island, Kingston.

Purpose. The purpose of this practicum was to provide me with a personal learning experience in improving my skills in developing and implementing a training program for teens in the area of fire safety/burn prevention.

Method. I achieved the objectives of this practicum by employing the following procedures: 1) determining the availability of funds for the program, 2) selecting a program planning committee, 3) deciding program goals and methods, 4) selecting resource people for the program, 5) recruiting teens and adult coordinators, 6) using various channels to market the program, and 7) trying various techniques to improve my leadership skills.

Findings. The practicum afforded me the opportunity to attain a better understanding of, and competence in, the areas of planning, coordinating and marketing a training program. This experience also served as a channel for me to become more aware of how I could improve my leadership skills.

SOUTHERN REGION

IVERSON, Maynard J. and BROWN, Ronald A. (in cooperation with other members of the Research Committee of the Southern Region). "The Role of High School Vocational Agriculture/Agribusiness Programs in the Occupational Success of Graduates." September, 1979, Auburn University, Auburn.

Purpose. The study was designed to determine the role of vocational agriculture/agribusiness programs in the occupational success of program graduates from the Southern Region. Specific objectives were to:

(1) Determine the current status of vocational agriculture/agribusiness programs for a selected year with regard to occupation, futher education, economic level, and other demographic factors.

(2) Ascertain the perceived value of the various components of the vocational agriculture/agribusiness programs as indicated by program completors.

(3) Secure the reaction of program completors to recent and proposed changes in the vocational agriculture/agribusiness program.

Method. Cooperating researchers in 10 Southern states utilized a uniform procedure for conducting the state components of the study. Data were analyzed at Mississippi State University and state printouts were distributed to participating researchers. The regional report was developed by committee leaders and printed at Auburn University. The population consisted of the 1974 graduates of high school vocational agriculture/agribusiness programs in the respective states of the Southern region. Within each state, a 10% systematic sample of departments, stratified by districts was drawn. Graduates were administered a two-page questionnaire by mail. After one follow-up mailing, a 10% random follow-up of non-respondents was conducted via telephone.

Findings. The 1252 respondents were primarily male, age 22 - 23, caucasian, from rural homes, employed in a non-agricultural job or farming, and earning over $10,000 annually. A majority of respondents completed three or four years of vocational agriculture and FFA, held the Chapter Farmer degree, and had several years of supervised experience programs. Experiences in vocational agriculture/agribusiness received high ratings from the graduates; they were in less agreement about teacher assistance, but highly supportive of specific program functions. A significant 92% said they would enroll again, if they had it to do over. The researchers concluded that the major components of the program are appropriate, that they should be continued, and that modifications to serve off-farm agribusiness as well as farming are justified. Eleven recommendations were made and five suggestions were made for further study.

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TENNESSEE

CRAIG, David G. "A National Study of the Supply and Demand for Teachers of Vocational Agriculture in 1978." Staff Study, 1979, University of Tennessee, Knoxville.

Purpose. The purpose of this study was to determine the nature and trends of vocational agriculture teacher positions and the supply and demand and placement of agricultural education graduates.

Method. Mailed questionnaires were sent to all known institutions preparing teachers of vocational agriculture and offices of head state supervisors in agriculture. Data were collected regarding the type of teaching positions, placement of agricultural education graduates, and the nature of supply and demand of vocational agriculture teachers. Tabular results show mean, mode, range, frequency and percentage statistics for each state, region and the nation as a whole. Selected trends were shown for a fourteen-year period.

Findings. There has been a shortage of vocational agriculture teachers for at least fourteen years. In 1978, a record 1,791 men and women were qualified through colleges and universities to teach vocational agriculture. Of these graduates, only 1,015 or 56.7 percent were placed in vocational agriculture teaching positions. Hence, there were 189 needed but unavailable teachers and 100 departments could not operate because of the lack of teachers.

Some other reasons for the short supply of vocational agriculture teachers are as follows: 1) The number of secondary positions has continued to rise at a rate of up to 6 percent per year since 1974. The number of post secondary positions has increased at a rate of about 10 percent per year; 2) the regular turnover of teachers was slightly higher (11.1 percent) than average; and 3) the low migration of surplus or available teachers to shortage areas.

During recent years the number of persons in the various types of teaching positions has been stable, as follows: 1) the largest number of teachers, 6,274 or 49.2 percent taught secondary classes only; 2) most teachers, 11,148 or 86.8 percent, taught in general or comprehensive high schools; 3) slightly more than one-half of the teachers taught in multiple teacher departments; and 4) almost one-half of the teachers taught part-time production and part-time specialized agricultural subjects.

TODD, John D. "Types of Ornamental Horticulture Programs Being Conducted in Tennessee." Staff Study, 1979, University of Tennessee, Knoxville.

Purpose. The purpose of the study was to determine the types of ornamental horticulture programs being conducted in Tennessee and the emphasis being given in the different occupational areas. This information was needed to develop curriculum materials for statewide use by ornamental horticulture teachers.

Method. The population of the study consisted of all vocational agriculture teachers in Tennessee who taught at least one course in ornamental horticulture during the 1978-79 school year. A list of these teachers was obtained from the State Department of Education. A questionnaire was developed for obtaining the needed information and was sent to the teachers requesting that they complete the form and return by mail.

Findings. There were 55 ornamental horticulture teachers in Tennessee during the 1978-79 school year. Twenty-two of these were considered full-time and 33 part-time teachers. All of the teachers reported teaching greenhouse management with over 25 percent of the total instructional time being devoted to this area of ornamental horticulture. Only 3 percent of their time was spent in arboriculture and 7 percent in turf management. All of the teachers reported having a greenhouse, 29 percent had nurseries, and 35 percent had head houses. Over 50 percent had a shop area. Seventy percent reported placing students in ornamental horticulture businesses for occupational experience. The average number of students placed was 5.25 per teacher.

TEXAS

CEPICA, M. J. and Irwin, J. F. "Development of Guidelines for Summer Vocational Agriculture Programs in Texas." Staff Study, 1979. Texas Tech University, Lubbock, Texas.

Purpose. The purpose of this study was to define the summer program of vocational agriculture as it is currently being conducted and to develop a set of guidelines for its operation in Texas.

Method. Questionnaires were developed by a statewide committee and were designed to obtain: (1) factual and numerical data pertaining to the summer program (2) opinions regarding the current operation of the summer program (3) suggestions for improvement of the summer program, and (4) rankings of nine pre-determined priority areas of the summer program. Three distinct groups were included in the study as follows: (1) teachers of vocational agriculture (2) high school administrators in Texas whose district offered vocational agriculture and, (3) teacher educators in the departments of the nine institutions in Texas where vocational agriculture teachers were trained and members of the staff of Vocational Agricultural Education of the Texas Education Agency. Questionnaires for the latter two groups were administered by mail while the teacher's questionnaire was administered at their first distinct in-service meeting of the 1978-79 school year. The data was presented in percentages and frequencies with a correlation of the three groups priority rankings.

Findings. Major findings of this study include the following: (1) teachers, administrators, and teacher educators and state staff, view the summer program as very important to the total vocational agriculture program, (2) teachers from all areas of Texas view the operation of the summer program basically the same, (3) the three groups surveyed exhibited some major differences when ranking the nine selected priority areas of the summer program. In order to articulate the priorities of the three groups, 44 guidelines were developed to emphasize desirable summer activities and improve communication, publicity, and community involvement.

CROZIER, Walter G. "Determination of the Need to Expand the Agricultural Course Offerings at San Antonio College." Doctor of Education Professional Report, 1979, Texas A&M University, College Station.

Purpose. The purpose of this study was to determine if a need for additional agricultural courses at San Antonio College existed.

Method. High school vocational agricultural students and 4-H Club members were sampled to determine the need. This was accomplished by the cluster sampling technique using questionnaires to gather information. Twelve departments, consisting of 857 students, were selected for sampling. Sixty-three high school age 4-H Club members of Bexar County were sampled from a total of 341.

Findings. Forty-five percent of the vocational agriculture students and 40 percent of 4-H members planned to major in an agricultural field after entering college. A small, but significant, number were planning to enter San Antonio College during the fall semester, 1979. Seventy-two percent of the vocational agriculture students and 80 percent of 4-H members planning agricultural careers said that they did not know that agricultural courses were offered at San Antonio College. It was concluded that a promotional program about agriculture at San Antonio College could possible draw students who formerly planned to attend other junior colleges.

HERRING, Don R. and WEBB, Earl S. "The Role of the High School Vocational Agriculture Program in Texas in the Occupational Success of Graduates." Staff Study, 1979, Texas A&M University, College Station.

Purpose. The purpose of the study was to determine the role of high school vocational agriculture programs in Texas in the occupational success of program graduates.

Method. As part of a Southern Region research project, the procedures followed in Texas were consistent with those used in the ten cooperating states. The population consisted of the 1974 graduates of high school vocational agriculture programs in Texas. A ten percent stratified random sample of vocational agriculture departments was drawn and teachers were asked to supply names and addresses of graduates. This process resulted in 747 names of graduates, who were administered a mailed, two-page questionnaire. A postcard reminder and one follow-up letter were mailed and a ten percent random follow-up of non-respondents was conducted via telephone. Four hundred and two of the 747 graduates, or 53.8 percent, responded to the survey.

Findings. Of the graduates, 45.5 percent entered the job market upon graduation from high school; 28.5 percent took one or two years of college; 21 percent completed a four-year college program; 47.3 percent were employed in non-agricultural occupations; 35.8 percent were in full or part-time farming or ranching and 41 percent were involved in other agricultural pursuits. Only 4.2 percent were unemployed. (Percentages exceed 100 since some respondents were represented in more than one occupational category.) The median gross income was $11,785. Graduates indicated a high degree of support for most of their experiences in vocational agriculture; 92 percent said that if they had it to do over, they would enroll in vocational agriculture again. Graduates placed high value on the continued inclusion of laboratory instruction, FFA, supervised occupational experiences, and instruction for adults in the program. They also supported 12-month employment of teachers, and agreed that vocational agriculture was useful to both farmers and agribusiness persons in the community.

HERRING, Don R. and WEBB, Earl S. "Guidelines for Organizing and Operating Multiple Teacher Departments of Vocational Agriculture." Staff Study, 1979, Texas A&M University, College Station.

Purpose. The purpose of the study was to develop guidelines for organizing and operating multiple teacher departments of vocational agriculture in Texas.

Method. A review of literature was utilized to develop a draft list of guidelines. Fourteen vocational agriculture teachers and the project directors than developed a tentative set of guidelines in a workshop which became the framework of a survey instrument designed to secure an evaluation of those guidelines from teachers in multiple teacher departments in Texas and to identify factors considered most important to the successful operation of a multiple teacher department. One teacher was identified from each of the 432 multiple teacher departments to participate, and returns were received from 331, or 76.6 percent of the teachers. The mean rating of each guideline was calculated as a measure of central tendency, and analysis of variance was used to determine if there were significant differences in the means for each guideline statement between teachers in two-teacher departments and teachers in departments with three or more teachers.

Findings. Teachers tended to agree with most of the guideline statements, as 71 of the 78 items received an overall rating of 3.0 or above on a 4.0 scale by all teachers. Teachers in two teacher departments were generally in agreement with teachers in departments with three or more teachers concerning the guidelines. There was a significant difference in the mean ratings of the two groups for nine items, and in each case teachers in departments with 3 or more teachers agreed more strongly than did teachers in departments with only 2 teachers. Factors dealing with human relations skills were viewed by teachers as most important to the successful operation of multiple teacher departments.

HUDSON, William E. "Inventory and Analysis of Professional Tasks Engaged in by Teachers of Vocational Agriculture in the Secondary Schools of New Mexico." Doctor of Philosophy Dissertation, 1978, Texas A&M University, College Station.

Purpose. The primary purpose was to develop job descriptions through use of professional tasks and duties engaged in and the relative time spent on those professional tasks and duties by vocational agriculture teachers in the different vocational agriculture teaching positions existing within the public secondary schools in New Mexico. The secondary purpose was concerned with providing teacher educators a data baseline of background characteristics useful in planning future pre-service and in-service training programs and for future research efforts in agricultural education.

Method. Data were gathered during the summer and early fall of 1977 through use of a pilot tested, mailed task inventory developed following procedures described by Melching and Borcher. Fifty vocational agriculture teachers who had taught vocational agriculture in New Mexico for at least one year and who were teaching during the 1976-77 school year returned task inventories used for analysis purposes. Analyses consisted of one-way analysis of variance of the relative time spent on tasks and duties by teachers grouped according to: (1) three departmental leadership responsibilities, (2) four agricultural subject matter teaching responsibilities, and (3) four crop reporting districts. The t-test of significance was used to determine significant differences in relative time spent on task and duties by superior teachers versus all other teachers.

Findings. The mean number of professional tasks performed by all New Mexico teachers of vocational agriculture was 87.5. All 110 tasks examined were performed by at least one teacher. Differences in relative time spent on tasks occurred but the differences were not large enough to constitute different job types for those teachers involved. However, there was a difference in the relative time spent by superior teachers when compared with all other teachers at the duty level for the four duty areas of instructional management, FFA activities, supervised occupational experience program, and professional role and development.

STOCKTON, Jerry D. and Tindol, N. D. "Determining Vocational Agriculture Teachers' Attitudes with Regard to Their High School Selection of a College of Agricultural Sciences." M. S. Thesis, 1979. Texas Tech University, Lubbock, Texas.

Purpose. The primary purpose of this study was to determine vocational agriculture teachers' attitudes with regard to their high school students selection of a College of Agricultural Sciences.

Method. A questionnaire was developed and disseminated to teachers of vocational agriculture in three areas of Texas to secure information related to the purpose of the study. The questionnaire contained a four part likert scale, several non-directed response questions, and ratings. Descriptive statistics such as mean, percentage, and frequencies were utilized in the analysis of data.

Findings. The vocational agriculture teachers indicated that "curriculum" was the most important item considered when advising students to a particular college or university. When the teachers were asked to list the reasons they advised students to a university listed in the questionnaire, "distance from home" was the most frequently reported answer. High school students rated the Animal Science department higher than other departments in the College of Agricultural Sciences regarding "interest" of high school students.

UTAH

BAHEN, Dennis George. "Competencies Needed for Careers in Ornamental Horticulture in Utah." Master of Science Thesis, 1979, Utah State University, Logan, Utah.

Purpose. The purpose of this study was to present descriptive data about the industry, determine the importance of the competencies needed for job entry, and assess the manpower needs of the ornamental horticulture industry in Utah.

Method. The identified population of 576 ornamental horticulture enterprises was categorized into seven areas of specialization. Arborists (4.5%), Maintenance of Landscapes (10.8%), Landscape Construction (18.6%), Golf Course (13.5%), Greenhouse Production (5.4%), Florist-Plant Shops (30.9%) and Garden Center-Nurseries (16.3%). The data were collected by a survey questionnaire. Thirty-eight percent of the industry sampled and 20% of the population responded to the survey.

Findings. Major findings of this study were as follows: That single enterprises conduct work in a number of the areas of specialization. Ninety-two of the ninety-four competencies were rated at least of some importance to entry level workers. The most important competencies common to all the areas of specialization were: human relations and communications, pest identifications and control, record keeping, and safety. The number of employees anticipated in the future is growing at a 16% yearly rate. Members of owners families comprise 17% of the industry's employees.

BIGO, Charles Henri. "Entry Level Competency Needs of the Utah Feed, Seed and Grain as Perceived By Vocational Agriculture Educators and Industry". Master of Science Thesis, 1979, Utah State University, Logan, Utah.

Purpose. The purpose of this study was to identify if any perceptual differences existed between educators and industry for entry level employment in: general competencies, credit and sales techniques; safety competencies; and personal competencies.

Method. Identical questionnaires were completed and returned by a total of 98 respondents (70%) and a total of 49 respondents (70%) of secondary vocational agriculture educators.

Findings. The study revealed that non-technical competencies were placed very high on the rank scale by both educators and industry. The data indicated industry and educators are in disagreement as to the importance values of technical competencies in the categories of sales and credit techniques relating to the industry. The educators and industry are in high agreement as to the relative importance of safety competencies. It's also recorded that industry is apprehensive towards OSHA.

TUBBS, Ray J. "A Comparison of Vocational Agricultural Facilities in Utah High Schools And Those in Selected States of the Western Region as Perceived By Vocational Agriculture Teachers". Master of Science Thesis, 1979, Utah State University, Logan, Utah.

Purpose. The purpose of this study was to collect data concerning class size, requirements of the physical facilities and the budget allowed for teaching agricultural mechanics.

Method. This study was limited to vocational agricultural teachers in Utah and ten agricultural teachers randomly selected from each of the following states: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, and Wyoming. Questionnaires were completed and returned by a total of 54 Utah Vocational Agricultural teachers and 50 teachers from the other states.

Findings. The study revealed a larger number of non-vocational agriculture students are enrolled in the agricultural programs in Utah than in the other states. The data indicated there are more total students enrolled in Utah vocational agricultural programs than in the other states per teacher. The facilities in Utah were generally smaller and less equipped for teaching basic agricultural mechanics as compared to other states. Many of the teachers in both groups perceived their facilities inadequate and all recommended improvements. The study also indicated that Utah teachers were receiving a lower budget based on student hours then were teachers from other states. Many teachers surveyed didn't know the amount of their capital or operating budgets for their vocational agricultural programs.

VIRGINIA

GILLIAM, Conrad M. "Attitudes of Virginia Vocational Agricultural Teachers Toward The Future Farmers of America (FFA)." Doctorate Dissertation, 1979, Virginia Polytechnic Institute and State University, Blacksburg.

Purpose. The purpose of this study was to assess the relationship between the attitudes held by Virginia's vocational agriculture teachers toward the FFA and certain variables contributing to these attitudes which may influence the ability of the teachers to incorporate effectively a FFA chapter into a local program of vocational agriculture.

Method. The sample of this study consisted of 201 vocational agricultural teachers randomly selected from the vocational agricultural teachers throughout the state. The data collection instrument was a two part questionnaire developed to obtain demographic data from the vocational agricultural teachers and for the measurement of their attitudes toward the FFA (a Likert type scale). The data were reported in terms of frequency counts, percentages and chi-square tests of independence.

Findings. Major findings of this study were: teachers of vocational agriculture in Virginia showed generally favorable attitudes toward the FFA; the number of years a vocational agricultural teacher had held previous membership in the FFA had no relationship to the teachers' attitudes toward the FFA; teachers with high participation in FFA activities during student teaching had more favorable attitudes toward the FFA; the type of school in which the teachers worked affected teachers attitudes toward the FFA; years of teaching experience had no significant affect on vocational agricultural teacher's attitudes toward the FFA.

HILLISON, John H. "The Role of High School Agricultural Education in the Occupational Success of Graduates in Virginia and Ten Southern States". Staff Study, 1979, Virginia Polytechnic Institute & State University, Blacksburg.

Purpose. The purpose of this study was to determine the impact of agricultural education upon the occupational success of 1974 program graduates in Virginia. The results of the Virginia study were pooled with nine other Southern States. The results for Virginia and the total for all ten states are reported in the study.

Method. The study was a descriptive study with causal-comparative or ex post facto aspects. A systematic random sample was drawn from the Virginia Agricultural Education departments. The sample consisted of 10% of the departments with every 10th department selected. The head teacher in every department selected was mailed a form to be completed with the name and address of all 1974 Agricultural Education graduates from that school. In addition to the name and address form, a cover letter co-signed by the state supervisor of Agricultural Education was sent to each head teacher. The head teachers identified 168 graduates. Of this total 77 responded to the mail questionnaire sent to them. For the non-respondents, 10 were randomly selected for telephone follow-up calls. A total of five were contacted via telephone and completed the instrument with the aid of a project staff member.

Findings. Descriptive statistics such as means, medians, frequencies and percentages were utilized. The results for Virginia indicated that (1) 22.0% of the graduates went as far as post high school education, (2) 54.9% completed three years of high school agricultural education, (3) 46.3% belonged to the FFA for three years, (4) 44.9% had a supervised occupational experience for two years or less, and (5) the median income was $8,437.50 for Virginia graduates as compared to $11,133.33 for the 10 Southern states.

McMILLION, Martin B. "Why Agriculture Teachers Return to Teaching." Staff Study, 1978, Virginia Polytechnic Institute and State University, Blacksburg.

Purpose. Numerous studies have been conducted to ascertain the reasons why agriculture teachers leave teaching. Few studies, if any, have attempted to solve the problem of agriculture teacher shortage by investigating the reasons why former teachers of agriculture return to teaching. The purpose of this study was to ascertain the reasons why former teachers of agriculture return to the teaching of agriculture.

Method. State supervisors and teacher educators in the thirteen southern states provided the names and addresses of agriculture teachers who had returned to teaching during the three previous years, 1975, 1976, and 1977. Questionnaires were mailed to 96 persons. A follow-up postal card was sent to non-respondents. Forty-nine valid questionnaires were returned. (Several of the names supplied were those who had never taught before). The data were summarized using the mean, mode, frequency and percent.

Findings. The 49 returning teachers had returned from jobs in 25 different categories. The three most frequent job categories in order were farming (20 percent), school administration (14 percent), and other teaching (6 percent). From 21 possible reasons for returning, the most important in order were: 1) wanted to work with youth, 2) wanted 12-month employment, 3) chance to visit homes, farms, and businesses, 4) hours are better in teaching, 5) less pressure in teaching, and 6) job was closer to home. The two most important reasons for leaving the other job was that a sense of accomplishment was lacking and it was necessary to be gone from home more.

Respondents were asked to list the one or two real reasons for returning. Elected superintendents of schools return to agriculture teaching when they lose elections. Former agriculture teachers who can increase retirement benefits have an incentive to come back to teaching. Self-employed persons for whom business is bad return to teaching. Economics seems to be of prime importance to the decision of teaching agriculture.

RENEAU, Fred W. "Factors Associated with Vocational Use of Adult Instruction in Horticulture." Doctor of Education Dissertation, 1979, Virginia Polytechnic Institute and State University, Blacksburg.

Purpose. The purposes of this study were to determine the extent of vocational use made of the instruction received by adult students enrolled in horticulture and to determine whether selected teacher, school-community, and adult student factors were associated with vocational use.

Method. A teacher questionnaire and the adult student questionnaire were mailed to each of the 54 secondary teachers of adult horticulture during the 1978-1979 school year. A total of 54 teachers and 721 adult students responded in Kentucky, Ohio, and Virginia. The data were used to determine the extent of vocational use made of the instruction and whether selected teacher, school-community, and adult student factors were associated with vocational use.

The statistical methodologies used in analyzing the data were the Product-Moment Correlation (Pearson r), the t-test, the F-test (analysis of variance), and chi square.

Findings. Results of the analysis of data revealed that 151 out of 721 adults (20.94 percent) in the total group (Kentucky, Ohio, and Virginia) used the instruction received in adult horticulture programs in a horticultural or related occupation. Five hundred ninety-two out of 721 adult students (82.1 percent) indicated that the instruction received in adult horticulture programs contributed to their economic well-being.

The findings also revealed that the number of horticultural businesses in the community in Kentucky, Ohio, and Virginia was associated with vocational use made of the instruction. There was a positive relationship between the vocational use scores of the adult students and sex of the adult students in Kentucky, Ohio, and Virginia. The mean vocational use scores by programs were associated with years of experience of the teacher in teaching adult horticulture classes in Virginia. The mean vocational use scores by programs were associated with the number and quality of facilities in Ohio. The vocational use scores of the adult students were associated with the age of the adult students in Ohio.

WEST VIRGINIA

EPEJU, William F. "Professional Competencies Perceived Important And Acquired During Student Teaching By Agricultural Education Majors At West Virginia University 1971-72 Through 1976-77." Masters Thesis, 1978, West Virginia University, Morgantown.

Purpose. The purposes of the study were to evaluate the student teaching program for agricultural education majors at West Virginia University to determine: (1) The level of importance of each of the 124 validated professional competencies needed by vocational agriculture teachers, as perceived by supervising teachers and student teachers; (2) The degree of acquisition of each professional competency by student teachers as perceived by supervising teachers and student teachers; and (3) The degree of relationship between perceptions of supervising teachers and student teachers regarding importance and acquisition of each competency.

Method. A questionnaire containing a list of 124 professional competencies was mailed to twenty-six supervising teachers and seventy-nine agricultural education majors at West Virginia University who had completed student teaching during the academic years of 1971-72 through 1976-77 inclusive. Responses were received from nineteen supervising teachers and fifty-four student teachers, making a 69.5 percent return from the survey population.

Statistical procedures used for analyzing data were mean responses of supervising teachers and student teachers, analysis of variance to measure significance of differences existing in perceptions of competence importance and acquisition between supervising teachers and student teachers and coefficient of correlation to determine relationship between importance and acquisition of competencies as perceived by supervising teachers and student teachers.

Findings. Although eight of the 124 competencies showed significant differences between importance ratings of competencies as perceived by supervising teachers and student teachers, there was complete agreement between the two groups of respondents that all 124 competencies are important for teaching vocational agriculture.

Supervising teachers and student teachers agreed that 122 of the 124 competencies were acquired by student teachers at a medium level and/or above during student teaching.

Positive and significant correlations between importance and acquisition of professional competencies by student teachers existed in forty-six competencies according to the perceptions of supervising teachers and also existed in sixty-six competencies according to the perceptions of the student teachers.

LAWRENCE, Layle D. "Occupations Of WVU Students Who Graduated And/Or Certified To Teach Vocational Agriculture, 1968-1977." Faculty Research, 1978. West Virginia University, Morgantown.

Purpose. The study was designed to answer the questions, "How many of those who complete certification requirements at WVU become vocational agriculture teachers", and "What other occupations do WVU graduates who majored in agricultural education enter?"

Method. A list of former students who graduated and/or certified to teach vocational agriculture was compiled for the academic years, 1968 through 1977. Career patterns of each individual were traced through personal knowledge of agricultural education faculty members, personal contact, or contact with the individual's friends or relatives. Foreign students and those who graduated with a major in agricultural education but failed to meet teacher certification requirements were not included in the study.

Findings. One hundred and thirty students graduated and/or certified to teach during the ten-year period, 1968-77. Of those, 101 (78 percent) have taught or were currently teaching vocational agriculture in public secondary schools. Twenty-seven, or 21 percent, of the 130 have completed the Master of Science Degree, and one has earned a Ph.D. Nearly 60 percent were teaching vocational agriculture at the time the study was made. Another 8 percent were in other school related occupations, primarily administration and supervision. Thirty, or 23 percent, were engaged in agriculturally related work. Only eight (6 percent) were employed in industry or the armed forces—fields outside the purview of agriculture and education.

LUPANGA, Ildefons J. "Evaluation Of The Agricultural Program In The Secondary Schools Of Tanzania As perceived By Graduates, Teachers And Headmasters." Masters Thesis, 1978, West Virginia University, Morgantown.

Purpose. The major purpose was to determine the effectiveness of the agricultural program in the secondary schools of Tanzania, as perceived by 1975 and 1976 graduates of the program, their teachers and school heads. The effectiveness was investigated in terms of: (1) General perceptions of all respondents on program effectiveness; (2) Ex-student perceptions of the program: (3) Ex-student perceptions of skills gained in several areas of agriculture: (4) Relevance of the course to Tanzanian conditions; (5) Adequacy of materials and facilities: (6) Teacher competency as rated by ex-students and the teachers themselves; (7) General comments regarding the program from all respondents, and (8) General suggestions given by respondents concerning program improvement.

Method. The questionnaire method was used to collect data. Three types of the questionnaire were prepared, one for each of the three groups of respondents, namely: graduates, teachers and school heads. Data were processed using the services of the West Virginia University's Computer Center.

Analysis of variance (F-value) and the Chi-square test were used to determine significant differences between responses at the .05 level of confidence. Means were also calculated to give a gross indication of attitudes towards various aspects of the agricultural program.

Findings. (1) Respondents indicated that field and workshop equipment, classroom and library facilities were inadequate. The school farm was rated only marginally adequate. (2) Funding of the program, supervision, follow-up programs, selection procedures and inservice training opportunities for teachers were all seen as inadequate. (3) Time allocated to agriculture on the school time table, and relevance of the course and the syllabus now in use, received favorable ratings. (4) The teachers' professional qualifications were rated adequate by graduates and the teachers themselves. School heads, on the other hand, thought the teachers needed upgrading. For two areas of agriculture, rural economy and agricultural mechanics, the teachers expressed a weakness. (5) Overall, a majority of respondents expressed some satisfaction with the program though a number of reservations were expressed. Suggestions were made for improving the program. (6) A majority of graduates indicated that considerable skills were gained in the management of perennial crops, vegetable gardens, annual crops and livestock, grain storage, keeping simple farm records, carrying out simple soil conservation practices and seedbed preparation. (7) A majority of student respondents said that little or no skill was acquired in simple survey and oxenization.

MALLILO, Anthony T. "Competencies Needed In Working With Handicapped Children As Perceived By Vocational Teachers." Masters Thesis, 1979, West Virginia University, Morgantown.

Purpose. The primary purpose of this study was to determine competencies vocational teachers in West Virginia possess in educating handicapped students. The study was also concerned with importance attached to various competencies, and preferred means of improving teacher skills.

Procedure. The descriptive method of research using the inquiry form technique was utilized in this study. Information concerning perceived importance and competence of statements dealing with educating the handicapped was obtained from 263 vocational teachers who were employed during the 1977-1978 school year.

Statistical procedures used for analyzing data were number and percent distributions, analysis of variance and cooefficient of correlation.

Findings. Vocational teachers in West Virginia expressed a definite need for improving their skills in teaching handicapped students.

Male teachers, teachers over 41 years of age, and teachers with two-year or Associate degrees or no degree at all, perceived themselves to be more competent in various aspects of educating handicapped students than did female teachers, teachers under 41 years of age, and teachers holding Bachelor's or Master's degrees.

Teachers who conducted self-contained handicapped classes perceived themselves to be more competent than did other teachers. Teachers who had no experience teaching handicapped students perceived themselves to be less competent than did other teachers. Teachers expressed a need for appropriate teaching materials and teaching techniques for educating handicapped children. Inservice workshops sponsored by a college or university were the preferred means to improve skills. Workshops should offer college credit and be three days to one week in length. Such workshops should be held during the month of June.

WISCONSIN

SALAMI, Christopher Abu "An Investigation into how High School Vocational Agriculture Teachers in Wisconsin Perceive Inservice Education", M.S. Thesis, University of Wisconsin-Madison under the supervision of Professor John F. Thompson.

Purpose of Study. Data provided by the study of teachers' perceptions of inservice education programs could be a basis for policy and planning of inservice programs in relation to the needs of vocational agriculture teachers in Wisconsin. The purpose of this study was to determine the perceptions of high school vocational agriculture teachers in Wisconsin towards some aspects of inservice education such as: 1) Inservice education activities, 2) professional resources, 3) organization of inservice programs, 4) methods of evaluation of inservice programs, 5) barriers to inservice attendance. The study was also to determine to what extent teachers' perceptions were affected by 1) age 2) levels of education 3) years of teaching experience 4) size of department of agri-business.

Methodology. An instrument consisting of two parts 1) six demographic questions and 2) twenty-three selected activities and statements related to inservice education were presented in the form of a questionnaire. The questionnaire or opinionnaire was mailed to one hundred and thirty-seven randomly selected vocational agricultural teachers in Wisconsin. Teachers were asked to check on a Likert-type scale 1-5 (very unimportant to very important or strongly disagree to strongly agree) depending on how they value the activities or statements as important in keeping teachers up to date. The data collected were analyzed for number, percentage and mean distribution of responses. Chi square tests for significance were computed for responses at the .05 significant level.

Findings. Teachers, regardless of age, years of teaching experience, highest degree held and size of department, unanimously agreed that these activities were important in keeping teachers up to date. 1) One week summer conference sponsored by the State Department of Public Instruction, 2) Exchange of ideas with colleagues. Teachers agreed with these statements: 1) More teachers should be involved in planning inservice programs. 2) Job responsibility was not a barrier to attendance at inservice activities. 3) Inservice education should relate directly to problems encountered in the classroom. All groups of teachers unanimously and strongly disagreed with these statements: 1) Inservice programs scheduled at three hour sessions at night. 2) There is an adequate follow up to determine the effects of inservice activities. Chi square tests for significance of differences between responses of groups of teachers showed that five activities and statements were significant.

SHABBOUR, Eltigani Elsheikh "A Follow-Up Study of Graduates from Pilot Programs of Agribusiness in Wisconsin", Ph.D. Dissertation, University of Wisconsin-Madison under the supervision of Professor John F. Thompson.

The Problem. This study investigated: 1) the application of objectives i.e. instructional contents of the pilot programs of agribusiness to students job situation six years after high school graduation, and 2) the relationship between current socio-economic status of the graduates of the pilot agribusiness programs and selected variables measured during high school attendance.

The Population. Individuals studied were the graduates of the pilot programs of agribusiness who graduated at the end of the academic year 1971-72.

Collection of Data. Two kinds of data were used in this study. First a questionnaire was sent to the 1971-72 graduates of the programs and ninety graduates responded by filling out and returning the questionnaire. This constituted the first kind of data. The second kind was in the form of information gathered about these graduates when they were attending the programs as students. These data were available in the records of the pilot programs committee and it was used when testing relationships between current socio-economic status of the graduates and selected variables measured during high school attendance.

Analysis of Data. Two techniques were used in the analysis of data. The first one was analyzing data in terms of percentages with descriptive statements accompanying the figures and the second one was using the chi square (x^2) test to test relationships.

Findings. 1) Graduates of the pilot programs of agribusiness were found to be married and their attained level of education varied with an inclination toward graduation from high school as their highest level of education. They were employed in different kinds of jobs but they were inclined to work in agriculture related jobs and they held up to three jobs after graduation from high school. They worked within varying distances of their high schools but most were inclined to work within their high school districts. They earned more than $5,500 annually and they were found to be currently employed in jobs which they rated as either excellent or good. 2) The opinion of the graduates of the pilot programs of agribusiness was that knowledge offered in these programs could be described as either useful or partially useful in their job situation and that the pilot programs met "some" to "all" of their educational needs. 3) An expansion in the agricultural curriculum of these schools did take place and current emphasis was not strictly given to the area of production farming such as it had been in the past. At the same time graduates rated occupational experience as most useful to their job situation followed by agribusiness survey, then soils and finally horticulture. 4) Graduates of the pilot programs of agribusiness believed that there were some specific instructional subjects which could be rated as more relevant to job situation than others. 5) Graduates believed that skills learned in the pilot programs of agribusiness varied in their degree of applicability to their job situation and they were inclined toward not having additional or refresher courses. 6) Graduates were inclined to believe that the instructional subject most useful on job situation was mathematics but they were also inclined to believe that other courses such as agribusiness courses were generally important on job situation. 7) Graduates of these programs felt that they were successful on their current jobs and satisfied with their life even though they did not own homes. 8) There was an inclination of these graduates to stress the idea of more practical work in these programs as a means of improving them. 9) Relationship between current socio-economic status of these graduates and selected variables measured during high school time revealed that: i) Sex had a relationship with both the kind of current job held after graduation from high school and annual earnings of graduates. It had no relationship with level of education attained, success on current job, satisfaction with life and owning a home of these graduates. ii) Farm background had a relationship with kind of current job held after graduation from high school, but it had no relationship with level of education attained, annual earnings, success on current job, satisfaction with life and owning a home of these graduates. iii) Occupational experience in high school had a relationship with level of education attained and kind of current job held after graduation from high school, but it had no relationship with annual earnings, success on current job, satisfaction with life and owning a home of these graduates. iv) Extra-curricular activities in high school had no relationship with level of education attained, kind of current job held, annual earnings, success on current job, satisfaction with life and owning a home of these graduates. v) Vocational maturity in high school had no relationship with level of education attained, kind of current job held, annual earnings, success on current job, satisfaction with life and owning a home of these graduates.

WASHIMA, Nbatiavkaa Daniel "Attitudinal Orientations of Wisconsin Post-Secondary Agriculture Teachers Toward Participation in In-Service Education Programs, Ph.D. Dissertation, University of Wisconsin-Madison under the supervision of Professor John F. Thompson.

The Purpose. The purpose of the study was to determine and analyze the attitudes of post-secondary agriculture teachers toward participation in in-service education programs in Wisconsin.

The Problem. The study investigated 1) the perceptions/opinions of the Wisconsin post-secondary agriculture teachers regarding trends, organization, planning, control, delivery, types, content, time-periods, and barriers to participation in in-service education programs; 2) the differences in these perceptions/opinions; and 3) the coordination of in-service education programs.

Methodology. Data were gathered from 112 of the 143 post-secondary classroom teachers of agriculture. The main instrument used in the data collection process was a mailed questionnaire. Three null hypotheses guided the analyses of the data. One-way analysis of variance (ANOVA) and the chi-square statistic were the statistical techniques used in the data analyses and hypotheses testing.

Findings of the Study. 1) The respondents indicated that in-service education should be an ongoing staff development process, but it should not be linked to the evaluation and supervision process. 2) Work experience in related business or industry was highly preferred as a type of in-service education, whereas, college/university campus in-service education for no academic credits was least preferred as a type of in-service education. 3) The opinions/perceptions of the post-secondary agriculture teachers were that agricultural content areas such as horticulture, agricultural mechanics, animal technology, etc. were highly preferred. 4) The respondents highly preferred that the organization of in-service education be done by specialists working in agriculture or related business rather than have it be organized by consultants from institutions outside the state of Wisconsin. 5) The respondents indicated that the control of in-service education should not be done by any one particular agency. They preferred prominent educators to deliver in-service education to having it being delivered by state vocational education agencies. 6) The post-secondary agriculture teachers felt strongly that teachers should plan in-service education but they least preferred state education agencies to plan in-service education. 7) The respondents did not differ significantly on majority of the studied aspects of in-service education. The independent variables of educational level and length of service were not significantly related to the responses regarding the coordination of in-service education. The three null hypotheses of the study were not rejected.

Recommendations. It was recommended that: 1) Individuals involved in or responsible for the development of in-service education for teachers should pay attention to the expressed needs, interests, concerns, perceptions, and opinions of the teachers themselves. 2) Teachers should be involved in the planning, organizing, and carrying out of in-service education programs. The locus of learning should be in the teachers and they should be helped to learn for themselves what they want to learn. 3) Each of the studied aspects of in-service education should be given a unique consideration because they are individually related to different values and have differing programming implications.

STUDIES IN PROGRESS
1979-1980

ALABAMA

Alabama A & M

BYRD, Taylor, Jr. "A National Study of Minority Participation in Agricultural Education." Staff Study, Alabama A & M University, Normal.

BYRD, Taylor, Jr. and WHEELOCK, Gerald. "Vocational Education and Manpower Development in the Tennessee Tombigbee Waterway Corridor - Phase III." Staff Study, Alabama A & M University, Normal.

KYLE, William. "A Study of Attitudes of Madison County Residents Toward the Use of Solar Energy as Economical Home Heating Fuel." Master's Thesis, Alabama A & M University, Normal.

Auburn University

IVERSON, Maynard J. and DAVIS, Paul D. "The Effects of Selected Inservice Education Methods on Reducing the Apprehension Levels of Vocational Agriculture/Agribusiness Instructors in Teaching Students with Physical Disabilities." Staff Study, Auburn University, Auburn.

IVERSON, Maynard J. and SPENCER, Clayton. "Occupational Status and Program-Related Views of the 1974 Graduates of Vocational Agriculture/Agribusiness Education in Alabama." Staff Study, Auburn University, Auburn.

PATTERSON, Gordon. "Occupational Opportunities for Agribusiness Education Students in the Tennessee Valley Region of Alabama." Staff Study, Auburn University, Auburn.

PATTERSON, Gordon. "Professional Needs Assessment of Vocational Agriculture/Agribusiness Teachers in Alabama." Staff Study, Auburn University, Auburn.

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Tuskegee Institute

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TABLE I

LOCATION OF PREVIOUS SUMMARIES OF STUDIES IN AGRICULTURAL EDUCATION

On Microfiche in the ERIC System
1968 - 1974*

	Regions			
Year	Central	North Atlantic	Pacific	Southern
1968-1969	ED 036 642	-	ED 036 635	ED 038 543
1969-1970	ED 047 107	ED 047 108	ED 147 110	ED 047 109
1970-1971	ED 057 252	ED 061 415	ED 061 447	Ed 061 446
1971-1972	ED 076 800	ED 107 904	ED 078 164	ED 079 472
1972-1973	ED 103 694	ED 107 903	ED 109 376 (1972-1974)	ED 110 745
1973-1974	ED 110 660	ED 110 792		ED 110 746

*Documents with ED numbers may be found in any complete ERIC collection of ERIC microfiche or ordered from EDRS, P.O. Box 190, Arlington, Virginia 22210.

The Summaries of Research and Development Activities in Agricultural Education were compiled nationally for the first time in 1974-75. Data pertaining to location of previously compiled national summaries may be found displayed on Table II.

TABLE II

LOCATION OF PREVIOUS SUMMARIES OF STUDIES IN AGRICULTURAL EDUCATION

On Microfiche in the ERIC System
1974-1978*

Year	Microfiche Number
1974-1975	ED 114 635
1975-1976	ED 134 707
1976-1977	ED 151 532
1977-1978	ED 167-781

*Documents with ED numbers may be found in any complete ERIC collection of ERIC microfiche or ordered from EDRS, P.O. Box 190, Arlington, Virginia 22210.

PREVIOUS COMPILERS AND EDITORS

Summaries of Research and Development
Activities in Agricultural Education
United States of America

1974-75	Dr. J. David McCracken, The Ohio State University
1975-76	Dr. J. David McCracken, The Ohio State University
1976-77	Dr. Alfred J. Mannebach, The University of Connecticut
1977-78	Dr. Alfred J. Mannebach, The University of Connecticut
1978-79	Dr. Jimmy G. Cheek, The University of Florida